1-1-2015

Implementing the National Early Warning Score for Healthcare Assistants (HCA-NEWS) in an Acute Hospital

Roisin McLoughlin
Royal College of Surgeons in Ireland

Implementing the National Early Warning Score for Healthcare Assistants (HCA-NEWS) in an Acute Hospital

Roisin McLoughlin

A Dissertation submitted in part fulfilment of the degree of MSc Leadership Health Professions Education, Institute of Leadership, Royal College of Surgeons in Ireland

2015

Implementing the National Early Warning Score for Healthcare Assistants (HCA-NEWS) in an Acute Hospital

MSc in Leadership in Health Professions Education
2013 -2015

Student ID:	13109464
Submission Date:	13th May 2015
Word Count:	16,483
Facilitator:	Dr Pauline Joyce

RCSI
ROYAL COLLEGE OF SURGEONS IN IRELAND
COLÁISTE RÍOGA NA MÁINLEÁ IN ÉIRINN
Institute of Leadership

Ireland	Bahrain	Dubai
RCSI Reservoir House,	PO Box 15503,	4th Floor A/P25,
Ballymoss Road,	Building No. 2441,	Dubai Healthcare City,
Sandyford,	Road 2835,	Dubai,
Dublin 18,	Busaiteen 436,	PO Box 505095,
Ireland.	Kingdom of Bahrain.	United Arab Emirates

Declaration Form

Declaration:

"I hereby certify that this material, which I now submit for assessment for the Dissertation Module on the MSc in Leadership in Health Professions Education is entirely my own work and has not been submitted as an exercise for assessment at this or any other University."

Student's Signature(s): Roisin McLoughlin

Date: 13th May 2015

Student's Number (s): 13109464

Table of Contents

List of Tables

List of Figures

Glossary of Terms

AED- Automated External Defibrillator

ADON/SM - Assistant Director of Nursing/Service Manager

ALERT - Acute life-threatening events recognition and treatment

AWTTS- Aggregate weighted track and trigger systems

CNM- Clinical Nurse Manager

COMPASS©**:** An education programme for the early detection and management of deteriorating patients developed in Australia in 2006.

DoH- Department of Health

DON - Director of Nursing

EWS – Early Warning Score

FETAC- Further Education and Training Awards Council

HCA – Healthcare Assistant

HCA-NEWS- Healthcare Assistant –National Early Warning Score

HIQA – Health Information Quality Authority

IMEWS-Irish Maternity Early Warning System

INO - Irish Nurses Organisation

ISBAR - Identify-Situation-Background-Assessment-Recommendation

NEWS - National Early Warning System

NCEC - National Clinical Effectiveness Committee

NICE – National Institute for Health and Clinical Excellence

NMBI – Nursing and Midwifery Board Ireland

NPSA - National Patient Safety Agency

OD - Organisational Development

PEWS- Paediatric Early Warning System

RCP - Royal College of Physicians

RN - Registered Nurse

ViEWS - VitalPAC Early Warning Score: This is the evidenced based early warning score, the parameters of which have been agreed as the NEWS.

Abstract

This organisational development (OD) project centres on the implementation of the National Early Warning Score system for Healthcare Assistants (HCA-NEWS) in a medical directorate of an acute hospital. Recording and communicating a patient's vital signs is a cornerstone of nursing practice. Routine patient observations are now delegated to HCAs working under the guidance of registered nurses (RNs). The primary aim of the measurement of vital signs and the use of early warning scoring systems (EWS) is to enhance patient safety. The EWS is calculated as part of the overall vital signs assessment, and should be associated with appropriate and timely communication between the HCA and RN.

The HSE Change model framework was used detailing the progression of the change project. A mixed methodology approach was utilised. Questionnaires were sent to HCAs who met the pre-requisites to attend the HCA-NEWS education programme. HCAs were supervised and supported by the RN to complete a period of supervised practice and skills assessment. HCAs undertook a self audit of EWS recordings. To standardise documentation and communication of EWS findings to the RN an ISBAR communication sticker was completed and placed in the nursing documentation. Focus group interviews were conducted with three groups; Clinical Nurse Managers, RNs and HCAs. An audit of documentation of NEWS observations was undertaken using Nursing Quality Care Metrics. Results from data collection methods were in congruence with the literature.

The findings indicated increased communication between staff, increased confidence in caring, improved teamwork and further opportunities for HCAs to provide direct patient care. However, the key challenge identified was around deployment of HCA staff that completed EWS training.

Building strong collaborative relationships with key stakeholders resulted in motivation, ownership, partnership and commitment to the change. The project has been successfully implemented in the six medical departments of an acute hospital.

Acknowledgements

This dissertation could not have been finished without the help and support from my RCSI facilitator, fellow students, work colleagues and my family. It is my great pleasure to acknowledge people who have given me guidance, support and encouragement.

I wish to acknowledge Dr. Pauline Joyce, RCSI who gave me continuous support, help and advice which was very much appreciated. It has been my pleasure to work with Pauline and my fellow students especially in our action learning set where we discussed our projects, exchanged ideas, and helped each other.

My sincere thanks to my colleagues at work especially Catherine Cannon for taking on the role of being my critical friend in this journey and for her endless encouragement and full support during the last two years and to Paul Doherty for his expertise and support with IT.

I am also indebted to Elizabeth Neely for her support in co-facilitating the education programme, acting as scribe at the focus groups and assisting with implementing the HCA-NEWS in clinical practice.

A special thanks to my family. Words cannot express how grateful I am to you all for your support and constant encouragement that helped me through the hard times of this programme. Thank you.

1. Introduction

1.1 Introduction

This chapter provides an introduction to the organisational development (OD) change project undertaken by the writer. The purpose of this project was to implement the National Early Warning Score (NEWS) for Healthcare Assistants (HCAs) working in the medical division of an acute hospital. The NEWS is a bedside track and trigger scoring system used by staff to calculate a total early warning score (EWS) from routinely collected observations. It aims to indicate early signs of deterioration in patients' conditions and prompts more timely medical review and treatment of patients (HSE 2013). The writer provides the organisational context within which the change took place. A rationale for carrying out the project is provided, followed by a description of the project including the aim and objectives. The chapter ends with a summary and conclusion.

1.2 Organisational Context

In 2007, the National Institute for Health and Clinical Excellence (NICE) recommended that physiological track and trigger systems be used to monitor all adult patients in acute hospitals. In Ireland, the Health Information and Quality Authority (HIQA 2011) recommended using a nationally agreed early warning score to ensure that there is a system of care in place for the prompt identification and management of clinically deteriorating patients. The NEWS project was established as a work stream of the Acute Medicine Programme in 2011. The overall aim was to develop one integrated solution for NEWS and a

National Clinical Guideline to support this (HSE 2013). The National Patient Safety Agency (NPSA) (2007a) advocate monitoring changes in physiological observations closely, deteriorating patients are more likely to be identified before a serious adverse event occurs. Early identification is important to reduce mortality, avoidable morbidity, and length of stay and associated healthcare costs. Significant importance has been given to the implementation of EWS systems across the UK (Hogan 2006) and Australasia (Green and Williams 2007), in an attempt to improve patient safety and mortality for acutely ill patients in hospital (NICE 2007; Kyriacos *et al*. 2011). In Ireland, HIQA (2011) recommended using a standardised NEWS system. The Acute Medicine Programme in 2011 established a NEWS project workforce to develop and nationally agree and implement one NEWS system in the Irish healthcare system. This was endorsed by the National Clinical Effectiveness Committee (NCEC). The NEWS, National Clinical Guideline No. 1 published by Department of Health (DoH 2013) identifies the elements required to implement the NEWS for adult patients in the acute hospital setting.

The Irish healthcare system now has an established national standardised, systematic approach to assessment and responding to the acutely ill adult. The Royal College of Physicians (RCP) (2012) reported that NEWS has been estimated to save around 6000 lives each year and recommends all hospitals in the UK introduce the NEWS tool (RCP 2012). A review of EWS by Smith *et al*. (2008) identified a total of 33 EWS systems or track-and-trigger systems used in

hospitals throughout the UK, highlighting that the many adaptations of EWS questions their validity (Subbe 2010; Carberry *et al*, 2014). The NEWS in the Irish healthcare system is based on international evidence incorporating the VitalPAC ^{TM} Early Warning Score (ViEWS) parameters (HSE 2009). These were primarily validated for medical patients by Prytherch *et al*. (2010) and later validated for use on both medical and surgical patients (Bleyer *et al*. 2011; Kellett *et al*. 2011).

1.3 Rationale

The role of the HCA has developed to support the changing demands of healthcare, particularly in relation to the recording of vital signs (Watson 2014). HCAs play a key role in the recognition, care and monitoring of acutely ill patients by undertaking routine clinical observations (James *et al*. 2010, Hogan 2006). Butler-Williams *et al*. (2010) conducted a study examining the role of the HCA and the Registered Nurse (RN) in caring for the acutely ill ward patient and identified the HCA as ideally placed to contribute to improvement in patient care. The monitoring of vital signs including the measurement and recording of temperature, pulse, respiratory rate and blood pressure is often delegated to and undertaken by qualified HCAs as opposed to the RN. Hogan (2006) reports a shift in focus of the scope of the RNs role in clinical practice from hands on patient care to a role that involves increased delegation to the HCA.

HCAs currently undertaking routine clinical observations do not routinely measure and record all of the vital signs necessary to calculate a total EWS (HSE 2013). An education session was developed nationally for HCAs who currently measure, record and communicate to a RN, a patient's vital signs in the acute hospital setting. This will educate HCAs to measure all vital signs that are necessary to calculate a total EWS and record findings on the Adult Patient Observation Chart. A physiological track and trigger system is recommended to be used to monitor all adult patients in acute hospitals (NICE 2007). A study by Smith *et al*. (2008) reported that the best performing aggregate weighted track and trigger systems collected data on pulse rate, respiratory rate, systolic blood pressure, level of consciousness (AVPU), temperature, oxygen saturations (SaO2) and inspired oxygen (F1O2).

To undertake the HCA-NEWS programme the HCAs are nationally required to have successfully met the following criteria (HSE 2013):

- nominated by Director of Nursing
- have successfully attained Further Education and Training Awards Council (FETAC) level 5 Health Service Skills Certificate or equivalent
- have successfully completed the FETAC level 5 Activities of living Patient Care Module
- have undertaken Heartsaver Automated External Defibrillator (AED) within the last two years

A National education programme was provided at local level which facilitated HCAs to develop and update their skills, knowledge and understanding in undertaking clinical observations incorporating the NEWS. On completion of the education programme the HCA can continue to undertake clinical observations. In addition they were supervised and supported by the RN to complete a period of supervised practice and skills demonstration. This was to enable the HCA to achieve competence in recording and calculating the patients total EWS and communicate their findings to the RN who delegated the task. Patient safety is of paramount importance. The HCA must be trained and deemed competent to carry out this role safely. RNs must decide on the appropriateness of delegating this task, and supervise accordingly. NICE (2007) and the Irish Nurses Organisation (INO 2006) whilst they support HCAs undertaking clinical observations and highlight the importance of adequately trained staff undertaking vital signs assessment they also emphasise the RN remains accountable. The Code of Professional Conduct and Ethics for Registered Nurses and Registered Midwives (Nursing and Midwifery Board Ireland (NMBI) 2014: 28) states that the Nurse

> *Is accountable if you make a decision to delegate a nursing task to someone who is not a registered nurse or midwife*

The code proceeds to inform the RN

> *If you delegate tasks or roles, you should provide comprehensive and effective assessment and planning, communication, monitoring and supervision, and evaluation and feedback*

The Nurse Practice Development team used the Nursing and Midwifery Quality Care metrics tool to undertake audits of the documentation of patients' vital signs using the Adult Patient Observation Chart taken in the medical department.

1.4 Aim and Objectives

1.4.1 Aim

The aim of this project was to implement the HCA-NEWS on six medical departments in an acute hospital focusing on the HCA competently measuring and recording patients vital signs including calculating and recording a total EWS using the Adult Patient Observation Chart, and communicating the findings to the registered nurse (RN) in accordance with local policy.

1.4.2 Objectives

The objectives of this project are to:

1. Establish HCAs perceptions of undertaking training in HCA-NEWS programme prior to commencing the programme in November 2014

2. Provide HCA-NEWS education programme for 13 HCAs from the six Medical Units of an acute hospital by end of November 2014 that is 100% consistent with the National Training programme

3. Establish that the HCA will be satisfied or very satisfied with

- the training provided by end of November 2014
- carrying out the NEWS by February 2015

4. Ensure that the HCA completes a period of supervised practice and skills demonstration in their clinical area and is assessed by RN Mentor as competent in measuring and recording and communicating patients' vital signs and totalling patients' EWS as delegated by the RN to the HCA by 12th January 2015

5. Develop and implement local policy with practice development to support practice

6. Implement the HCA-NEWS on each of the six medical units by February 2015

7. Establish that the Clinical Nurse Manager (CNM) and RN is satisfied or very satisfied in delegating NEWS to the HCA by February 2015

8. Ensure NEWS Documentation completed by HCAs will be 100% compliant with local policy by end of February 2015

1.5 Role of the Writer in the Organisation and Project

The writer works as a Specialist Coordinator in the Centre of Nursing and Midwifery Education and is responsible for planning, facilitating and providing continuous professional development programmes for Nurses and Midwives and HCAs. The HCA-NEWS project is a national initiative in which the writer was trained as a facilitator to deliver the education programme. Therefore the writer decided to implement and led the project within the local organisation. The writer identified and engaged with stakeholders including the Director of Nursing (DON), the Assistant Director of Nursing Service Manager (ADON/SM), the Nurse

Practice Development Team and the Clinical Nurse Managers (CNMs) who were fully committed to the implementation of this project.

1.6 Summary and Conclusion

This chapter has provided an introduction to the OD project of implementing the NEWS for HCAs working in the medical division of an acute hospital. The organisational context was outlined giving the reader the background to the development and establishment of the NEWS system within the Irish healthcare system. The rationale for the project highlighted that the role of the HCA has developed to support the changing demands on healthcare. The aim and objectives of this project were outlined. The national education programme was provided at local level which facilitated HCAs to develop and update their skills, knowledge and understanding in undertaking clinical observations incorporating the NEWS. The writer introduced her role within the organisation. The following chapters 3 - 5 outline the processes used in the planning, implementation and evaluation of the OD project.

2. Literature Review

2.1 Introduction

This chapter provides a discussion of the role of the HCA in undertaking the skills of vital signs including calculating, totaling, recording and communicating a patient's total EWS based on a review of the literature. The aim of the review was to critically appraise the development of the role of the HCA in implementing the HCA-NEWS and took into account literature based on documentation of patients' observations and EWS. The writer gives an overview of the search strategy used and highlights key themes emerging from the literature.

2.1.1 The development of Early Warning Scores observation tools.

Numerous pivotal studies undertaken in the late 1990's and early 2000's revealed that in-hospital cardiopulmonary arrests, or deterioration in the patient's clinical condition, was generally preceded by a period of time when the physiological status of the patient was abnormal (McQuillan *et al*. 1998; Goldhill *et al*. 1999; Goldhill and McNarry 2004). This was evident in measurements recorded of patient's vital signs of respiratory rate, blood pressure, heart rate and temperature suggesting that potential adverse effects in patient outcomes could be prevented. Further studies revealed that warning signs were often not recognised nor communicated by ward staff which lead to delays in diagnosis, treatment, or referral, resulting in increased patient morbidity, mortality and admission to intensive care units or cardiac arrests which are preventable or avoidable (Buist *et al*. 1999; Nolan *et al*. 2005; Smith *et al*. 2014; Preston and

Flynn 2010; Jones *et al*. 2011; Quirke *et al*. 2011; De Meester *et al*. 2013). EWS or track and trigger systems were developed as patient observation tools. Using a numerical scoring system for each physiological vital sign the scores are then totaled to identify patients at risk of deterioration (Morgan *et al*. 1997; Subbe *et al*. 2001). These patient observation tools were introduced to improve the safety of acutely ill patients in hospital (Smith *et al*. 2008; Mohammed *et al*. 2009.; Donohue and Endacott 2010) ensuring they receive prompt treatment by appropriately experienced staff (Gao *et al*. 2007). Guidelines from NICE and the NSPA highlighted the importance of introducing these systems to recognise patient's deterioration promptly and to initiate an appropriate response (NICE 2007; NPSA 2007a).

2.2 Search Strategy

For this literature review all primary research published during 2009 – 2014 which included studies of HCAs and EWS or track and trigger systems within a general ward setting were searched. The search also included literature on the documentation of patient's physiological observations and EWS. Computer based electronic searching was used to access the library databases and search online nursing and medical journals and books published between 2009 and 2014. The electronic databases searched included CINAHL, Cochrane, Medline, PubMed and Web of Science. These were searched using the following terms both separately and combined: Healthcare assistant, HCA, nursing assistant, healthcare support worker, nurse aides, enrolled nurse, unregistered and

unregulated staff, early warning score, early warning score system, track and trigger systems, patient observations, vital signs, physiological monitoring and patient deterioration. Results involving studies with HCAs and EWS were limited during this period therefore the search was expanded to include literature published from 2005 – 2014. Relevant publications were reviewed for reference lists and citations. They included research articles and literature reviews of which 19 are included in the literature review (appendix 1). The majority of studies were internationally based with only one Irish study identified. A total of 33 articles were selected. Grey literature sources were searched and 10 relevant government agencies documents were used. Papers with reference to Maternity early warning scores (MEWS) or Paediatric (PEWS) and EWS within critical care areas were excluded from this literature review as the writer was only concerned with implementing NEWS for the adult patient in an acute hospital.

2.3 Review of Themes

The key themes emerging from the literature reviewed are

- Patient Safety and Suboptimal Care
- Monitoring and Recording Vital Signs and EWS
- Education and Training in Vital Signs monitoring and EWS
- Delegation and Competence

2.3.1 Patient Safety and Suboptimal Care

Numerous studies, papers and reviews have been published internationally regarding the safety of acutely ill patients in general wards (Gao *et al*. 2007; NICE 2007; Chaboyer *et al*. 2008; Odell 2009; Quirke *et al*. 2011; Kyriacos *et al*.,

2011; Francis 2013) several of which attribute deterioration in the patient's clinical condition to failed monitoring of vital signs (McQuillan *et al*. 1998; Goldhill 2004; Endacott *et al*. 2007; Cooper *et al*. 2011; Buist and Stevens 2013). McQuillan *et al*. (1998) identified in their seminal study that the sub-optimal care of patients on general wards was directly related to increased mortality rates and the admission of acutely ill patients to intensive care. Furthermore their findings claim that 41% of these admissions could have been avoided. This demonstrated that early signs of patient deterioration were either not recognised or not managed appropriately prior to the patient deteriorating further, resulting in the need for transfer to a higher order of care and requiring intensive care and support. Delivering safe care in a complex, pressurised and fast moving healthcare environment continues to be one of the greatest challenges facing healthcare workers today (World Health Organisation 2011). The need to focus on patient safety and improve the quality and consistency of medical care in acute hospitals has been highlighted in a number of national and international reports. The Commission on Patient Safety and Quality Assurance (2008) in its report Building a Culture of Patient Safety, report that patients are entitled to expect the highest standards of safety and quality by healthcare professionals.

Recording a patient's physiological observations is considered part of daily ward routine however, in the UK, the National Confidential Enquiry into Patient Outcomes and Death (NCEPOD 2005) highlighted the failure to recognise clinical deterioration in patients in the acute hospital setting which lead to delays in

appropriate management. A further enquiry in 2012 revealed that signs of clinical deterioration are often missed, misinterpreted or mismanaged (NCEPOD 2012). Infrequent monitoring of basic vital signs can also pre-empt early signs of patient deterioration resulting in delays in transferring the patient to intensive care (Kyriacos *et al*. 2011). Furthermore, The NPSA (2007a) in its fifth Patient Safety Observatory report Safer Care for the Acutely Ill Patient contains a detailed analysis of serious patient safety incidents reported over a one-year period. It was found that 11% of these relate to the subject of deterioration which was not recognised or acted upon. The findings in a subsequent report titled 'Recognising and Responding Appropriately to Early Signs of Deterioration in Hospitalised Patients' NPSA (2007b) indicate that factors such as observations not being taken, early signs of deterioration not being recognised, observations causing concern not being reported and not responding to these appropriately contribute to staff not detecting and responding to the patient's clinical deterioration.

Communication failures between teams contributed to delays in referrals and in delivering appropriate essential care. Andrews and Waterman (2005) explored how staff utilise information relating to EWS and vital signs to determine and react to deterioration and found that information needs to be communicated in a succinct credible way to Doctors when relating deterioration concerns. Miscommunication and non-communication were highlighted as two of the most common root causes of patients experiencing preventable and unnecessary harm within health care settings (Gordon *et al*. 2012). The use of the ISBAR

(Identify-Situation-Background-Assessment-Recommendation) communication tool to communicate deterioration in a patient's condition is used in hospitals in Ireland. The ISBAR technique is a simple way to plan and structure communication and to standardise reporting and safety checklists to improve communication. Poor communication has been identified as a contributing factor to adverse incidents where clinical deterioration is not identified or properly managed (HSE 2011).

NICE (2007) reported that failure to seek advice will contribute to sub-optimal care of acutely ill patients. However, international evidence has identified that using a systematic approach to identifying and managing the critically ill patient that outcomes can be improved (Steen 2010). A study by West *et al*. (2012) highlighted the use of implementing a crew resource management training programme used initially in aviation to improve flight safety in select nursing units in USA. The aim was to ensure nursing assistants had protected time to undertake vital signs to improve efficiency, morale and patient safety in the healthcare setting. Senior nurses protected nursing assistants from distractions when undertaking patients' vital signs which resulted in improvements in communication, efficiency and increased staff morale.

2.3.2 Monitoring and Recording Vital Signs and EWS

NICE (2007) recommended that physiological observations should be monitored at least every twelve hours with the frequency increasing if abnormal physiology

was detected. A study undertaken by Hands *et al.* (2013) in the UK found that the frequency of vital signs monitoring in hospital often appears to be inadequate. There was only partial adherence to clinical protocols where sicker patients had an increase in monitoring of their observations taken in timely repeat assessments. Alarmingly these findings echo Odell *et al*. (2009) who found that there is no consensus on the frequency and type of monitoring that patients ought to receive which raises concern. The NPSA (2007a) report identified that staff rarely carried out routine observations during the night and that observations are seen as tasks with a low priority. A fundamental part of caring for patients is taking patient observations and according to Higgins *et al.* (2008) and McMillen and Pitcher (2010) is one of the most significant clinical skills performed by nurses and HCAs. Temperature, pulse rate, blood pressure, and oxygen saturation are all routinely measured in an automated, non-invasive manner. Monitoring the respiratory rate is manually measured in patients on general wards. Substantial evidence is found in the literature to support that an abnormal respiratory rate is an early indicator of physiological deterioration and predictor of potentially serious clinical events (Mc Bride *et al*. 2005; Van Leuvan and Mitchell 2008). The literature has identified repeated failings in the recording of vital signs. Wheatley (2006) reported that the recording of the respiratory rate was routinely missed, which depict that, despite their importance, respiration rates are documented less often than other vital signs. This is supported by Van Leuvan and Mitchell (2008) who noted the frequency of documentation was significantly lower for respiratory rate than for all other vital sign measurements. Serious

problems with incomplete and inaccurate recording of patient observations were highlighted in Donohue and Endacotts (2010) study. Cooper *et al*. (2011) concur that vital signs recordings were incompletely recorded. Furthermore, Endacott's *et al*. (2007) analysis of patients charts identified the level of consciousness was not recorded on any patient records reviewed in their study. In addition, Ludikhuize *et al*. (2012) demonstrated that recordings of vital signs were incomplete even when the EWS was 3 or more, respiratory rate and oxygen saturation were documented in only 30% to 66% of assessments.

The Resuscitation Council (UK) (2010) acknowledges that gaps in recording vital sign data are common but identify that the use of EWS can increase the completeness of vital sign monitoring. A central part of any patient assessment is the accurate recording of and interpretation of vital signs and yet it is this fundamental step that is often omitted. Other authors suggest that the recording of vital signs in patients is frequently delegated to HCAs and has become ritualistic and task orientated. This was demonstrated by Wheatley (2006) who undertook a study of registered nurses and HCAs recording of patient physiological observations. The study noted that time limits and demanding workloads were identified as barriers to the detection and management of the deteriorating patient and that the practice of recording vital signs data was routinely delegated to HCAs. Furthermore, digital equipment was also heavily relied upon by staff to take vital signs with very few actual manual assessments of patients vital signs observed. Preston and Flynn (2010) and James *et al*.

(2010) concur the overuse of digital equipment by staff. James *et al.* (2010) also identified poor staffing levels and staff being distracted by other patients as issues that need to be addressed in order to optimise patient care. Hogan (2006) purported that patient observations had become task oriented and were part of the wards' daily routine. In addition, similar to Wheatley (2006) Hogan echoed that nurses increasing workload led to the delegation of vital signs to the HCA. Kessler *et al*. (2010) outlined in their study that HCAs do twice as much direct patient care on the wards as RNs and this includes activities such as taking physiological observations. Moreover, McMillen and Pitcher (2010) believe that it is essential that HCAs have adequate training in how to do the task correctly and in how to document and report both normal and abnormal results.

Little is known about the accuracy with which EWS are calculated and charted (Prytherch 2006) and there are inaccuracies and miscalculations related to manual data collection (Cuthbertson *et al*. 2007). A literature review conducted by Smith *et al*. (2008) describes the aggregate weighted "track and trigger" systems (AWTTS) and explores there predictive ability for serious adverse outcomes. The study found 33 unique AWTTS which questions their validity and reported the potential for recording and calculating errors. Hence the RCP (2012) recommended the use of a national EWS in the UK which would attempt to standarise practice. In a study published by Mohammed *et al*. (2009), the authors focused on the impact of improving accuracy and efficiency of EWS in acute care. The authors compared the collation and the calculation of a EWS score

using traditional paper and pen methods versus a hand-held computer system, VitalPAC. Their findings concluded that the traditional pen and paper method of deriving scores was less accurate than those aided by a computer based system. Smith and Oakley (2006) acknowledged that when the ward is busier the accuracy of pen and paper derived EWS scores is degraded. Using EWS have many advantages but they also have limitations (Preston and Flynn 2010). These include healthcare professionals not recording all the physiological parameters or failing to calculate the score accurately, which could put the patient at risk.

2.3.3 Education and Training in Vital signs monitoring and EWS

HCAs play a key role within the ward team in the detection and monitoring of acutely ill patients (James *et al*. 2010; Butler-Williams *et al*. 2010). James *et al*. (2010) examined the role of the HCA and reported that they were the recogniser, responder and recorder in caring for the acutely ill ward patient. They recommended mandatory training, scenario based learning, ongoing education and clinical supervision of HCAs to improve quality of care for acutely ill patients. Niegsch *et al*. (2013) outlined that progress was made in implementing the EWS in a Danish Hospital but further improvements were needed to implement EWS fully. They emphasised that the training programme used to implement the EWS needed to be redesigned to educate staff in recognising and caring for critically ill patients. Education has been highlighted as a need to enhance the ability of the HCA (Chua *et al.* 2013) focusing on increasing the awareness of the importance of performing complete vital signs monitoring. Wheatley (2006) emphasised that

HCAs had only a very basic level of training and education to undertake the responsibility of monitoring and recording vital signs. Education and training of all healthcare professionals in EWS has significantly increased with the introduction of programmes such as ALERT (Acute life-threatening events recognition and treatment) framework (Smith 2001) and COMPASS© education programme to support RNs in recognising and responding to the acutely ill adult. COMPASS© is the associated education programme incorporating the National EWS used in Ireland for all healthcare professionals with three parts to complete (HSE 2011):

1. An education manual and CD must be worked through independently.
2. The paper based Quiz must be completed.
3. A mandatory face to face session must be attended.

The NEWS Project which is a work stream of the Acute Medicine Programme in Ireland established the Healthcare Assistants Education Session on the National Early Warning Score (HCA-NEWS) in June 2013 which incorporates a tailored education programme and competence assessment prior to the RN delegating the EWS appropriately to the HCA. In the UK Mosley *et al*. (2007) acknowledged that 82% of 96 HCAs studied had never received training in acute illness. Lees (2011) reported that HCAs role is enhanced to perform patient observations but cautions they need a way of gaining competence to ensure patient safety. There have been developments in the UK of specific education programmes for HCAs. In Scotland the CRASH course for HCAs was implemented in NHS Lanarkshire (Watson and Carberry 2014) and a competency based in house training on

recognising and responding to the deteriorating patient aimed at nurses and HCAs in Luton and Dunstable Trust Hospitals (Jevon *et al*. 2011). Day and Oxton's (2014) study purported that all healthcare staff including HCAs completed the RCP's online e-learning module and received scenario based teaching prior to implementing the EWS across 3 hospital sites. As there are no standarised programmes of education for HCAs in EWS a similar programme to what is being implemented in Ireland may be of benefit to healthcare support workers in UK.

2.3.4 Delegation and Competence

Registered nurses (RN) are responsible for delegating to HCAs, and accountable for the appropriateness of delegation. HCAs have a valuable contribution to make to patient care (Kessler *et al*. 2010). However, care is delivered with sometimes little or no supervision and there are no minimum standards of training or competence. The RN needs to ensure that HCAs have the knowledge, skills, and competence to undertake the delegated tasks, taking into account the individual's own confidence and experience. The provision of support for HCAs to undertake training is important. The key to promoting patient safety is to ensure that HCAs are trained and competent to undertake the tasks delegated to them, and that accountability is clear (Bosley and Dale 2008). Johnson *et al*. (2014) explored the demands on the newly qualified nurse and described that the nurse's time and pressures to maintain records can influence how effectively they delegate to and supervise HCAs. Ward culture and individual working styles can

either promote team working or lead to working ‘in parallel’ resulting in less efficient collaboration between the Nurse and the HCA. Glasper (2013) reported that RNs may be unsure what they can delegate to the HCA as there is no mandatory or uniform training for HCAs in the UK. They also found that HCAs can feel pressurised to perform tasks that they are not competent to do. Decisions around delegation should be determined by patients' needs and interests.

2.4 Implications for the Project

The increasing demands of today’s health service have led to the role of the RN and the HCA evolving and progressing with HCAs now taking on roles formerly undertaken by the RN. Routine vital signs monitoring are frequently delegated to the HCA. A recurrent theme in the literature highlighted that the monitoring of vital signs have become ritualistic, task oriented with an over reliance on the use of digital equipment. HCAs were found to have a lack of knowledge to undertake vital signs monitoring, and repeated failings of observations that were incomplete and inaccurate have been identified (Wheatley 2006; Hogan 2006). However, further studies emphasise that this role is of paramount importance as the HCA plays a key part within the ward team in the detection and monitoring of acutely ill patients and reporting their findings to the RN (James *et al*. 2010; Butler-Williams *et al*. 2010). Ensuring staff are skilled and competent in their roles is crucial to improving patient safety in the general wards. Education and training is integral to developing the role of the HCA in order to provide safe, effective quality care

that has a positive impact on the quality of care provided to patients. For this OD project HCAs will undertake the HCA-NEWS education and training programme that will be introduced, implemented, embedded and evaluated in the medical departments of a general hospital. The HCAs will be educated and assessed following a period of six weeks supervision by a RN in the skills of measuring, recording and communicating patient's vital signs, incorporating the EWS using the National patient observation chart before being deemed competent. It is essential that HCAs are trained, skilled and assessed as competent in their role to enhance their ability to recognise and communicate early signs of deterioration to the RN. This will ultimately improve the quality of care for patients in a general ward.

2.5 Summary and Conclusion

In conclusion, this chapter has provided a summary on the development of EWS systems observation tools which assists with the detection of physiological changes and identifying patients at risk of further deterioration. The key themes emerging from the literature reviewed enabled a critical discussion around the role of the HCA in contributing to Patient Safety and explored issues such as failure to recognise patient's clinical deterioration and poor communication that can lead to suboptimal care. The ultimate aim is to improve the quality and consistency of care patients receive. The HCA is ideally placed to contribute to improvements in acute patients care and as such must be recognised as valued team members who are educated and trained to deliver safe quality care to patients in their care. Further themes explored the role of the HCA in monitoring

and recording vital signs, calculating and totaling a EWS and concluded with a discussion exploring the themes of Delegation and Competence. Chapter 3 outlines the methodology used to implement the OD project.

3. Methodology

3.1 Introduction

This chapter provides an overview of the OD project undertaken by the writer using the HSE change model (2008) as a change management framework. The writer will present a critical review of approaches to OD before setting out the change process using the four phases of the HSE change model – initiation, planning, and implementation and mainstreaming. Finally the chapter will be summarised to capture the main issues arising from the change process.

3.2 Critical Review of Approaches to Organisational Development

Change is not a new phenomenon (Amason 2010) it is an inevitable component of life which has been described as a complex process (Pettigrew and Whipp 1991). It is an ever-present feature of organisational life both at an operational and strategic level (Burnes 2004) and is regarded as a complex multi-faceted process (Shanley 2007) which may have a significant impact upon those involved (Senior and Swailes 2010).

Many different approaches to change and models for effecting change have been the subject of significant study and referenced in the literature for example,

planned approaches such as Lewin's model (1946) and the HSE change model (HSE 2008), emergent approaches (Pettigrew 1990), prescriptive approaches; Kotter's eight stage model (Kotter 1996), systems based approaches (Graetz *et al* 2006), behavioural approaches; the Stages of Change Model (Prochaska et al 1994), and finally top down, bottom up or sideways approaches (Beer *et al*. 1990;

O'Brien 2002; Shanley 2007). OD is a process that facilitates planned change at all levels of the organisation, and it is seen as a comprehensive effort to improve an organisation's ability to deal with its environment and solve problems (Senior and Swailes 2010). Cummings and Worley (2009) portray OD action research as a collaborative effort between those involved in any change and Alpander and Lee (1995) describe it is a continuous cyclical process that if recognised as part of an organisations values and beliefs will continue as a part of everyday's way of life.

Lewin (1946) a theorist, researcher and practitioner initiated a planned approach to change in 1946. His theory of change encompass a number of conceptual theories including field theory, group dynamics, action research and the three step model of change. Lewin perceived that these theories were inter-connected and necessary components of any change agenda, whether at an individual, group or organisational level. He proposed that before change and a new behaviour can be adopted successfully, the previous behaviour has to be discarded. According to Lewin a successful change project must, therefore, involve the three steps of unfreezing the present level or status quo, moving to the new level and refreezing this new level to make it permanent (Burnes 2004). This model of change recognises the need to discard old behaviour, structures, processes and culture before successfully adopting new approaches.

Contemporary literature on change management supports an emergent element in organisational change that is not fixed or linear but is spontaneous and unplanned. The work of Pettigrew (1985, 1990) is characteristic of an emergent approach which is concerned with the inter-relatedness of individuals, groups and organisations and how they are affected by the proposed change. According to this approach, models of change should accept that the process will be ambiguous and confusing at times. Pettigrew and Whipp (1991) argue that change occurs over time and is influenced by numerous unpredictable variables.

Kotter's (1996) prescriptive approach, using a series of steps to manage the change process emanated in an 8 stage model of change that is grounded in his observation that people and organisations generally resist change. The process of change is explained by emphasising the importance of sharing the vision, dealing with the complexities and challenges of change and how to communicate effectively to support different ways of working.

Much debate has occurred in the literature in regards to the direction of implementing change in organisations in terms of whether change is driven in a top-down or bottom-up fashion (Beer *et al*. 1990; O'Brien 2002; Shanley 2007) When a top-down approach (often associated with power) is employed to implement change and little or no explanation is given the change is less likely to succeed and more likely to result in resistance and failure to adopt the change. In using a 'bottom up' approach, the self-efficacy of the employee influences

whether they will engage or not in the change process (Beer *et al*. 1990; O'Brien 2002; Shanley 2007). By communicating and providing information employees tend to actively become involved in the change process resulting in change with staff as opposed to change being imposed. Higgs and Rowland (2011) propose that employees will have ownership of the change if engagement and participation are evident at every stage of the process. By implementing and adopting change, O'Brien's' (2002) case study has shown that this led to staff having a more positive attitude in their ability to overcome challenges and effectively engage with the change process. Change is unlikely to be successful in the long-term unless commitment and leadership emerges from different levels throughout the organisation (Shanley 2007)

The complexity of the change process in organisations was recognised by Rogers *et al.* (2005) and resulted in Complex Adaptive Systems (CAS) wherein change is not smooth or linear. In their work on CAS, Olson and Eoyang (2001) suggest that rather than focusing on the macro level of the organisation system, more powerful change processes occur at the micro level, where relationships and interactions shape emerging patterns. This approach to change acknowledges that change in any one area will inevitably affect another.

The concept that change is a complex and unpredictable phenomenon is supported by Shanley (2007) who reported that individuals involved in the change process should address not only the contextual systems factors but also

emotional issues, described as knowing and handling one's own and others emotions. Karp and Helgo (2009) suggest rather than formulating a model to suit all circumstances it is preferable to accept the fact that there is a degree of chaos during the change process, and that leaders should concentrate on identities and relationships in the organisations that will help them to cope with chaotic change.

3.3 Rationale for OD Model Selected

The HSE Change model (figure 1) was selected to guide the OD project. This model recognises that change is a cyclical continuous adaptive process. The Irish health services are engaged in an ongoing process of change and transformation at every level. Change involves people, processes, structures, culture and behaviour throughout the organisational system and requires leadership to introduce the change. This model promotes a consistent approach to change across the system, enabling people to move from the current to the desired future (HSE 2008). The HSE change model is evidence - based, where best practice incorporates relevant legislation, project management, a shared vision and where agreed partnership approaches to change are evident (HSE 2008).

3.4 HSE Change Model

The change process was initiated in response to the NEWS project a work stream of the Acute Medicine Programme to enable HCAs to undertake a programme of education to measure, record and communicate to a RN, a patients vital signs in an acute hospital setting. The NEWS Project was

developed in association with the Quality and Safety Directorate, the Patients representative groups, Nursing and Midwifery Services Directorate, Clinical indemnity Scheme, the Assistant National Director, Acute Hospital Services, Integrated Services Directorate, Irish Association of Nursing and Midwifery and the Therapy Professionals Committee (HSE 2008). The change process involved the development of HCAs to undertake a programme of education to measure, record and communicate to a RN, a patient's vital signs in six medical departments within an acute hospital setting.

Figure 1: HSE Change Model

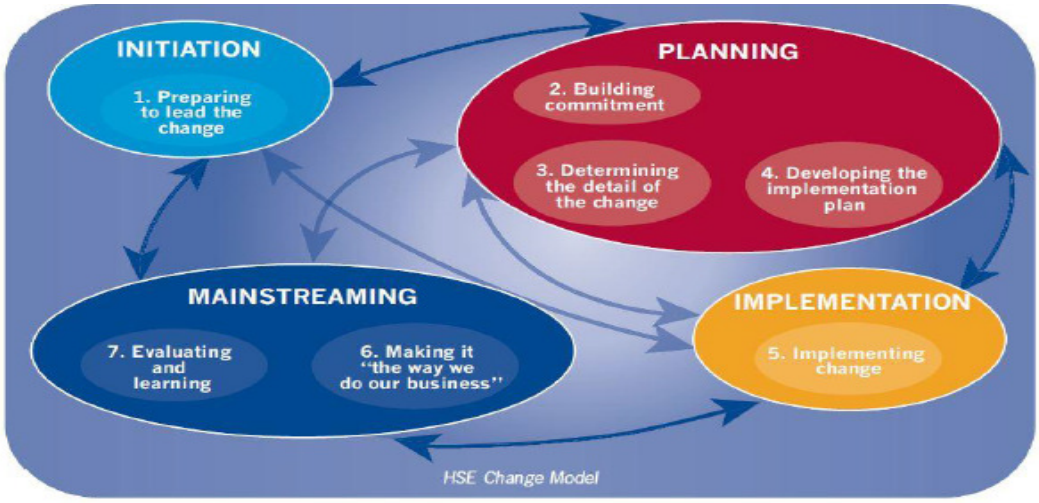


Figure 3: HSE Change Model

Model adapted from: Kolb, D. and Frohman, A. (1970), Huse, E. (1980), Neumann, J. (1989), Kotter, J.P. (1995), Ackerman Anderson, L. and Anderson, D. (2001), McAuliffe, E. and Van Vaerenbergh, C. (2006), and Project Management Institute (2004)

3.4.1 Initiation

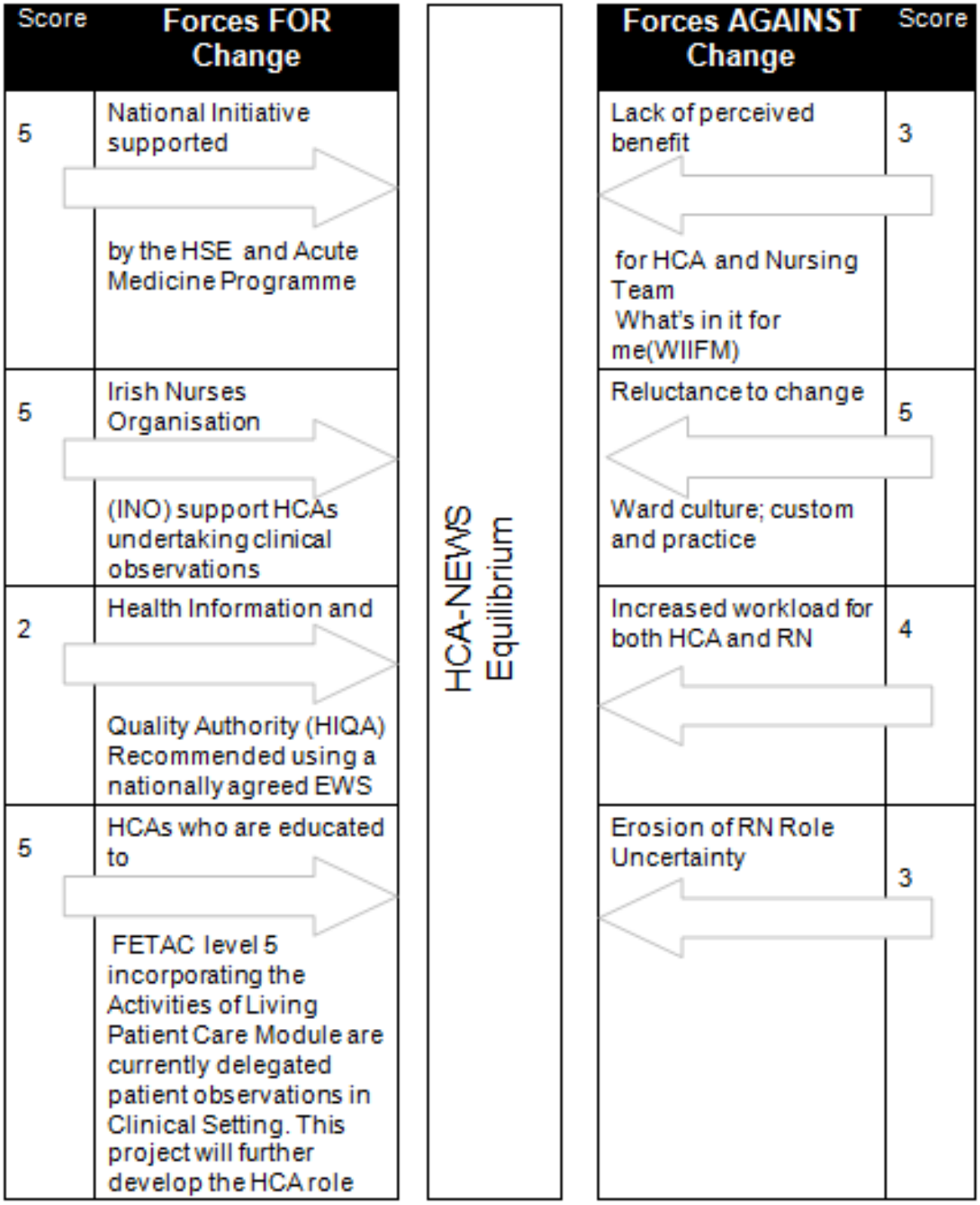
Step 1: Preparing to lead the Change

The purpose of this stage is to create readiness and a considered case for change, to establish a sense of shared responsibility (HSE 2008).

The writer undertook a force field analysis (figure 2) to determine what the opposing aspects or “forces” to the OD change was (Spath 2013). Referring back to Lewin’s 1946 theory people maintain a state of status quo by the simultaneous occurrence of driving or positive forces and restraining or negative forces operating within any field. When opposing forces are equal, no change or quality improvement can happen; as described by Lewin, driving forces (facilitators) push a system toward change and the restraining forces (barriers) hinder change. For change or quality improvement to happen, the driving forces must be stronger than the restraining forces (Burnes 2004).

The force field analysis indicated significant driving forces for the change including demands nationally by HSE and the Acute Medicine Programme. Each driver was assigned a weighting from 1-5, with 5 being the most forceful. The restraining forces were equally significant particularly the reluctance to change with custom and practice and ward culture contributing to resistance to change. The writer began planning and implementation by focusing on the restraining forces with the highest priority to work with the staff to reduce the strength of their resistance to change.

Figure 2: Force Field Analysis



Forces For Change Total Score: 17 - **Forces Against Change** Total Score: 15

A stakeholder analysis (table1) was undertaken by the writer to identify the range of stakeholders that are likely to be affected, directly or indirectly by the OD change (Huczynski and Buchanan 2001). The degree of their power and influence at the various stages of the project was determined.

Table 1: Stakeholder Analysis

Having Power

High Importance/Low Influence Keep satisfied • Registered Nurses • Healthcare Assistants	**High Importance/High Influence** Manage closely by effective communication for their views • Clinical Nurse Manager CNM3 • CNM2 • CNM1 • Resuscitation Training Officer (on leave) • Registered Nurse Mentors • Practice Development Coordinator and Team
Low Importance/Low Influence Not an immediate danger, but monitor as may be passives • Student Nurses • Medical Staff • Unqualified HCAs • Patient • Nursing Teams outside of Medical Department	**Low Importance/High Influence** Keep informed of what is happening • DON • Senior Nurse Management Team • ADON/SM • National Acute Medicine Programme • ONMSD • NMPDU/CNME

Having Influence

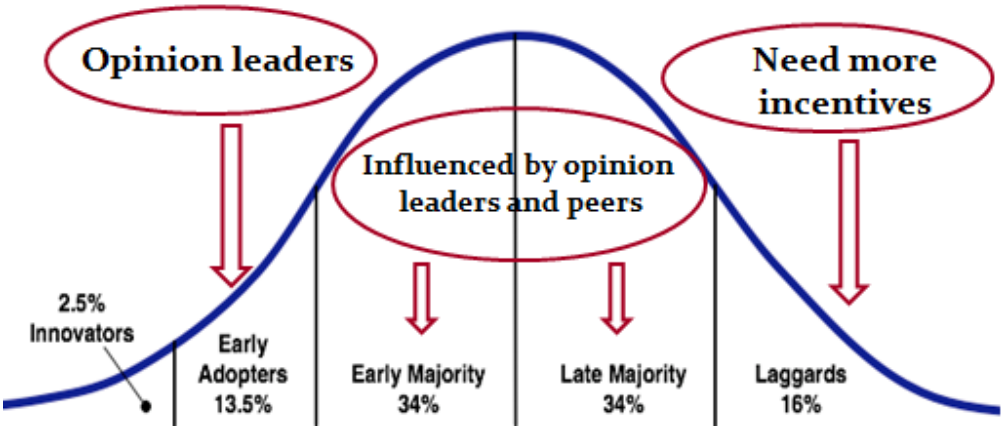
The stakeholder analysis ensured that the writer identified key stakeholders in terms of both their importance and influence. This enabled the creation of robust effective communication networks from the outset, building relationships, and increasing stakeholder participation.

Within the HSE Change model at this stage it is important to consider different types of cooperation within the organisation made up of teams, groups, communities and networks. These four ways of working represent the “soft structure” that gets things done in complex organisations (HSE 2008). The process of change places a strong emphasis on communicating and engaging with the people who need to contribute to or who will be affected by the change. Communication is a vital component of any change. Poor communication can result in resistance to change, developing barriers to the progression of the change.

In the initiation phase the writer found Rogers’ (1983) Diffusion of Innovations a useful framework in describing the process of change. According to Rogers five elements will determine whether a new activity will be adopted or if diffusion will occur: knowledge, persuasion, decision, implementation and confirmation. He describes five adopter categories of the ways in which people adapt to change: Innovators, early adopters, early majority, late majority and laggards (figure 3). This explains how people respond to and adapt to change and identifies their type in relation to the change. The change agent can therefore identify any

actions that can be taken to reduce their negative impact on the success of the OD project.

Figure 3: Diffusion of Innovation: (Rogers 1983)



On analyzing the stakeholders the writer met with the low importance/high influence network first; consisting of the DON, the ADON/SM and the Practice Development Coordinator (high importance/high influence). These are the Opinion leaders who have the ability to influence the rest of the organisation. A project implementation plan was shared and agreed. Leadership is about understanding where we are (sensemaking), identifying where we want to be (visioning), being able to find a creative way to get there (inventing), and having the capability to build trusting relationships (relating) necessary for it all to happen (Ancona 2009)

The DON agreed to establish with the ADON/SM, the HCAs who met the national criteria, as outlined in Chapter 1 (appendix 3). Time frames were agreed.

Consideration was given to resources required to support the change process, namely: release of staff to provide training, to work on policy and to attend focus groups, HCAs release to attend training, HCAs protected time to practice skills to undertake a total EWS and time for supervision of the HCA in practice by a RN for a period of six weeks to assess their skills competency.

A meeting was arranged with Practice Development team to review and revise existing policies for HCAs to incorporate the HCA-NEWS. The Practice Development team led out on amending the policy and the updated policy was ratified through the Policy Procedure and Guidelines group in the Acute Hospital in February 2015.

At the next stage the writer had planned to meet with the Resuscitation Officer who would have been a key member of the project in relation to training and implementation of the OD project in the clinical setting; however this person was on extended leave and would not be returning to work within the timeframe of planning and implementing the project within the organisation. The Practice Development Coordinator and the writer had attended the facilitators training of the EWS and agreed to provide the education programme to the HCAs identified to undertake the training. This would ensure that staff had the knowledge, information and skills to have the capacity to change.

Local Ethics Committee approval was applied for. The application was considered by members of the Ethics Committee and approval for the OD project was granted from the chairperson of the Ethics Committee on 14/10/2014 (appendix 2).

3.4.2 Planning

The purpose of the planning stage is to determine the specific detail of the change and to create support for the change process (HSE 2008).

Step 2: Building commitment
Step 3: Determining the detail of the change
Step 4: Developing the implementation plan

To create support for the change process and to further increase commitment for the change the writer contacted the CNM3 of the Medical Department requesting permission to attend the next meeting of the CNM group. The CNMs were identified in the stakeholder analysis as High Importance/High Influence therefore it was essential to ensure good collaboration. The purpose was to present the project to the group, get commitment and bring the CNMs on board. The writer had identified this group as the drivers of the initiative. An invitation was extended and time allocated. A presentation on the project was delivered to the CNMs. Dates and times of planned education programmes were given to facilitate planning of off duty rosters to ensure the release of the HCAs to attend training. How the CNMs would perceive the innovation would influence their decision on whether to adopt the initiative or not. The CNM3s role is one of an opinion leader and it was evident at the meeting that the group would be

influenced by various opinion leaders and peers. At this stage one of the CNM2s highlighted her commitment to the project and was recognised as an early adopter. To ensure buy in each CNM was subsequently contacted by email and a follow up phone call. Two CNMS (late majority) required a further face-to-face meeting. This was essential to establish a relationship with the CNMs and to support the CNM leaders through the change. Readiness for change is closely aligned to the culture of an organisation and is dependent on relationships between people, teams and services (HSE 2008). However key leaders must be motivated and willing to engage as this will increase the potential for effective change. Resistance can impede change and can include existing custom and practice and culture within the clinical setting. Here the writer demonstrated interactional leadership skills (Kanter 1991), developing relationships with a variety of people and groups within the organisation in order to create readiness to empower key CNMs and prevent negative attitudes that can impact on implementing a new practice in the clinical setting (Furlong and Smith 2005).

In collaboration with the DON, ADON/SM and CNM3 a list of HCAs who met the outlined national criteria was compiled. The writer issued a letter to identified HCAs inviting them to attend the education programme (appendix 4). Dates and times were furnished and a further email outlining same was sent to the CNMs. Participants were given written information outlining the purpose of the project, and their rights as a participant to withdraw at any time. Information on contact details were included if the participant had any enquiries regarding the project (appendix 5). A pre questionnaire was also included (appendix 7) and the

participant was asked to complete this and return it before they attended the education programme. Signed consent was obtained (appendix 6).

3.4.3 Implementation

This stage focuses on implementing and monitoring the project plan to ensure it is meeting its purpose (HSE 2008)

Step 5: Implementing the change

An email was sent to each CNM to identify the registered nurses (RN) who would act as nurse mentor to the HCA. To build links with staff and to acknowledge the RN mentors role an appointment was made with each of the RNs to discuss their role in more detail. This gave the RN mentors (High Importance/High Influence) the opportunity to assist in guiding implementation of the HCA-NEWS at ward level. The RN mentor supervised the HCA in their clinical areas and assessed their knowledge, skills and competency in undertaking and totaling EWS's. By communicating with staff and continuing to support staffs throughout the process were essential factors to address any issues as they emerged.

The two and a half hour HCA-NEWS education programme was delivered on the 26th and 28th November, 2014. The numbers that attended on both days were disappointing (n=4 on both days). At this stage the writer employed persuasion and negotiation skills to ensure the CNMs commitment to sending HCAs to attend training. The CNMs on two of the wards were contacted by phone and follow up emails and a further training date was provided and delivered on 13th January with the remaining five HCAs attending. Grimm (2010) suggests that a

leader facing constant change requires adopting a 'situational' leadership approach enabling them to develop different leadership styles to manage different situations.

On completion of the education programme a certificate of attendance was awarded to the participant (appendix 10). The HCAs (High Importance/Low Influence) were asked to complete a period of six weeks supervised practice and skills demonstration in their clinical area. A Skills Demonstration and Competence Assessment Record (appendix 12) was given to each participant to be completed by the RN mentor.

To establish how often the HCA was delegated the task, the shift worked and the total EWS score recorded the HCA was given an independent self audit of recordings document (appendix 13) and asked to keep a record of the number of observations undertaken by them over a two month period. To communicate the total EWS and vital signs the HCAs were asked to complete an ISBAR record of documentation and communication (appendix 11). On recording a EWS of greater than 2 or a new score of 1 the HCA was asked to complete this record which was used to communicate a patients total EWS to the RN. Both the HCA and the RN signed the record and this was placed in the Nursing documentation.

3.4.4 Mainstreaming

This stage focuses on integrating and sustaining the change into new ways of working and behaving (HSE 2008).

Step 6: Making it 'the way we do our business'
Step 7: Evaluating and learning

The writer set out to implement the HCA-NEWS on six medical wards in an acute hospital setting. This has been accomplished and twelve of the HCAs have successfully completed assessment competency skills demonstration records. Embedding change in an organisation and making it 'the way we do our business' (HSE 2008) takes time. It takes time for a new change to be fully accepted. Part of the process in implementing the change project was monitoring the change process as outlined through the stages of the HSE change model to ensure it was on track and that objectives were being achieved (HSE 2008). The key elements for success were effective leadership from key stakeholders, knowledge sharing, commitment, trust and pride. For the HCA, the pride felt when they realised what could be achieved could be seen as a powerful motivator in sustaining the HCA-NEWS programme in the medical department.

Sustainability involves an ongoing improvement process. It should be a process of continuous review and improvement of health service delivery to meet a set of agreed standards. It needs to be embedded to become part of the organisations normal business. The HCAs and the team's performance will be monitored to ensure procedures are being performed as expected. Nursing and Midwifery

Metrics are process performance quality indicators which provide a framework for how fundamental nursing care can be measured (HSE 2014). The Practice Development team regularly measure and track performance on relevant targets and key performance indicators in each ward in the acute hospital setting. The Practice Development team undertook three metrics of nursing documentation in NEWS observations as part of the evaluation process of the project. Evaluation methods were established at the project implementation plan phase and these will be discussed fully in Chapter 4.

The challenge for leaders is to build a culture of capability where all organisational members have a sense that they are valued and that they contribute to the leadership of the organisation. Duignan (2006) claims the ultimate challenge for leaders is to develop their own and others' capabilities so that their organisations can flourish in complex, uncertain, unpredictable and rapidly changing environments.

3.5 Summary and Conclusion

This chapter presented a critical review of approaches to OD before detailing the progression of the change project using the phases of the HSE Change Model – initiation, planning, and implementation and mainstreaming. This model is based on an OD approach and as such a strong focus was placed on the importance of communication with key stakeholders as well as on the project management element which brought structure to the process. This has highlighted the

importance of undertaking a force field analysis and a stakeholder analysis at the initiation stage of the change. By using Rogers (1983) Diffusion of Innovation framework it assisted in determining whether the change would be adopted or not. In building strong collaborative relationships with key stakeholders including sharing of information and ongoing consultation and participation resulted in motivation, participation, ownership, partnership and commitment to the change. The project has been successfully implemented in the six medical departments of an acute hospital.

4. Evaluation

4.1 Introduction

This chapter provides an overview of the evaluation of the OD project using the Logic Model of evaluation. Kirkpatrick's Four-Level evaluation model was used to evaluate the HCA-NEWS education programme. The writer provides a discussion of the significance of evaluation and discusses a range of evaluation models. The writer will then refer to the aim and objectives of the OD project to ascertain how they were achieved. The chapter ends with a summary and conclusion outlining the key points raised in the chapter.

4.2 Significance of Evaluation in Education Programmes

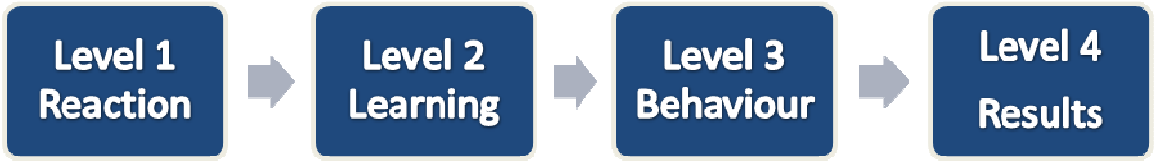
The World Health (WHO) (1998:3) defines evaluation as the 'systematic examination and assessment of the features of an initiative and its effects, in order to produce information that can be used by those who have an interest in its improvement or effectiveness'. Stufflebeam and Shinkfield (2007:22) suggest that the purpose of evaluation is four fold: improvement, accountability, dissemination and enlightenment. Evaluation is concerned with providing information (Cohen *et al*. 2008), investigating effectiveness, improvement and change (Frye and Hemmer 2012), making a value judgement (Cook 2010) and decision making, accountability and learning (McNamara *et al.* 2010). Evaluation has long been recognised as fundamental to good practice and is an essential part of the educational process (Morrison 2003).

Numerous evaluation models, such as the Context, input, process, product (CIPP) model, Kirkpatrick's four level evaluation model and the Logic model have emerged from three relevant theories, reductionism, system theory and complexity theory. Each of these theories can influence and assist evaluators in the choice of model used to evaluate programmes from various perspectives (Frye and Hemmer 2012). There is no model of evaluation deemed better than another, it is essential that a model is chosen that best meets a programmes/projects needs having considered the theories that influenced its development.

4.2.1 Kirkpatrick's Four-Level Evaluation Model

Kirkpatrick's Four-Level evaluation model (figure 4) was used to evaluate the HCA-NEWS education programme. The model focuses on learner outcomes and assists educators to measure the effectiveness of training in an objective way. The four-levels are Reaction, Learning, Behaviour and Results. The writer gained a thorough understanding of the learners' satisfaction and determined that the programmes objectives were met.

Figure 4: Kirkpatrick's Four-Level Evaluation Model



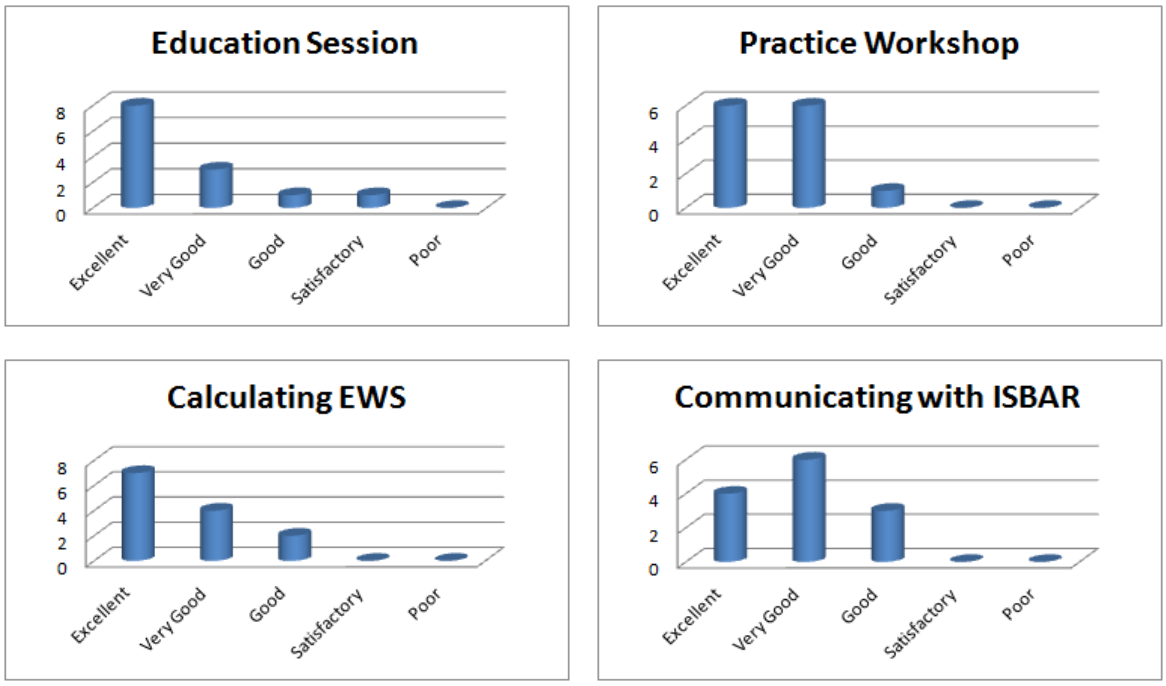
To evaluate the effectiveness of the education programme an electronic evaluation tool Nvolve was used to determine participant's satisfaction with training (figure 5). Written evaluation from participants elicited further qualitative information. All participants were satisfied with the education session with 85% rating the programme as excellent or very good.

> *The programme was well presented, easy to understand and informative (HCA)*

The practice workshop followed by a session on calculating the EWS were both rated highly by participants with 92% of participants finding this excellent or very good.

> *Brilliant getting to practice giving me more confidence (HCA)*

Figure 5: Evaluation of HCA-NEWS Education Programme using NVolve electronic tool

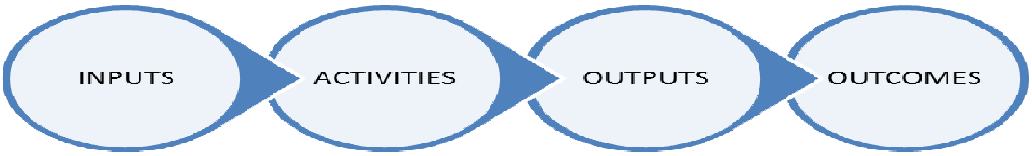


The Kirkpatrick four level model has been criticised for what it omits to take into consideration for instance learner motivation, relationships between programme components and programme context and use of resources which can all influence programme outcomes (Frye and Hemmer 2012). To assess changes in the learners' behaviour in the context for which the HCA was being trained and to identify the impact of the training programme the writer chose the Logic model to evaluate project outcomes.

4.2.2 The Logic Model

The logic model (figure 6) is a visual representation of systematic planning and implementation processes of a programme, showing how programme resources are expected to lead to the desired health outcome or behaviour change. The W.K. Kellogg Foundation (2004:3) offers a good description of logic modelling defining it 'as a picture of how an organisation does its work and the theory and assumptions underlying the programme'. Logic model diagrams typically contain central components such as programme inputs, activities, and outputs (Frechtling 2007). A programme logic model links outcomes (both short and long term) with programme activities and processes and the theoretical assumptions and principles of the programme (Kellogg 2004). A critique of this model relates to its linearity which may lead to evaluators focussing on specific components of the evaluation model without being aware of unforeseen outcomes that may arise during the evaluation process (Frye and Hemmer 2012).

Figure 6: The Logic Model Components



4.3 Methods and Measures

The writer chose to use the Logic Model's interactive framework grounded in systems theory to evaluate this project. The model specifies the intended relationships between its evaluation components which need constant updating as the project evolves. This amalgamates with the continuous process or cyclical nature of evaluation that the writer has demonstrated throughout the OD project. Using the model the writer illustrates how creating actionable plans that had clear outcomes with explicit steps exemplify solving programme problems. The writer found it useful to begin with the desired Outcomes and then worked backwards through the other components (Frechtling 2007). This approach provided a roadmap to guide the writer in using a conscious process that created an explicit understanding of the challenges ahead. These were the internal and external influences that can impact on planned work and the resources available to complete the change project within a specific timeframe. This contributed to an ongoing process of discussion, commitment, and reflection with stakeholders to ensure the proposed change was implemented, embedded and evaluated. According to Kellogg's (2004) logic model approach to programme effectiveness,

research focuses not only on whether, but also on how and why a programme worked. Table 2 explains how the objectives of the project were evaluated against the outcomes using the logic model evaluation tool.

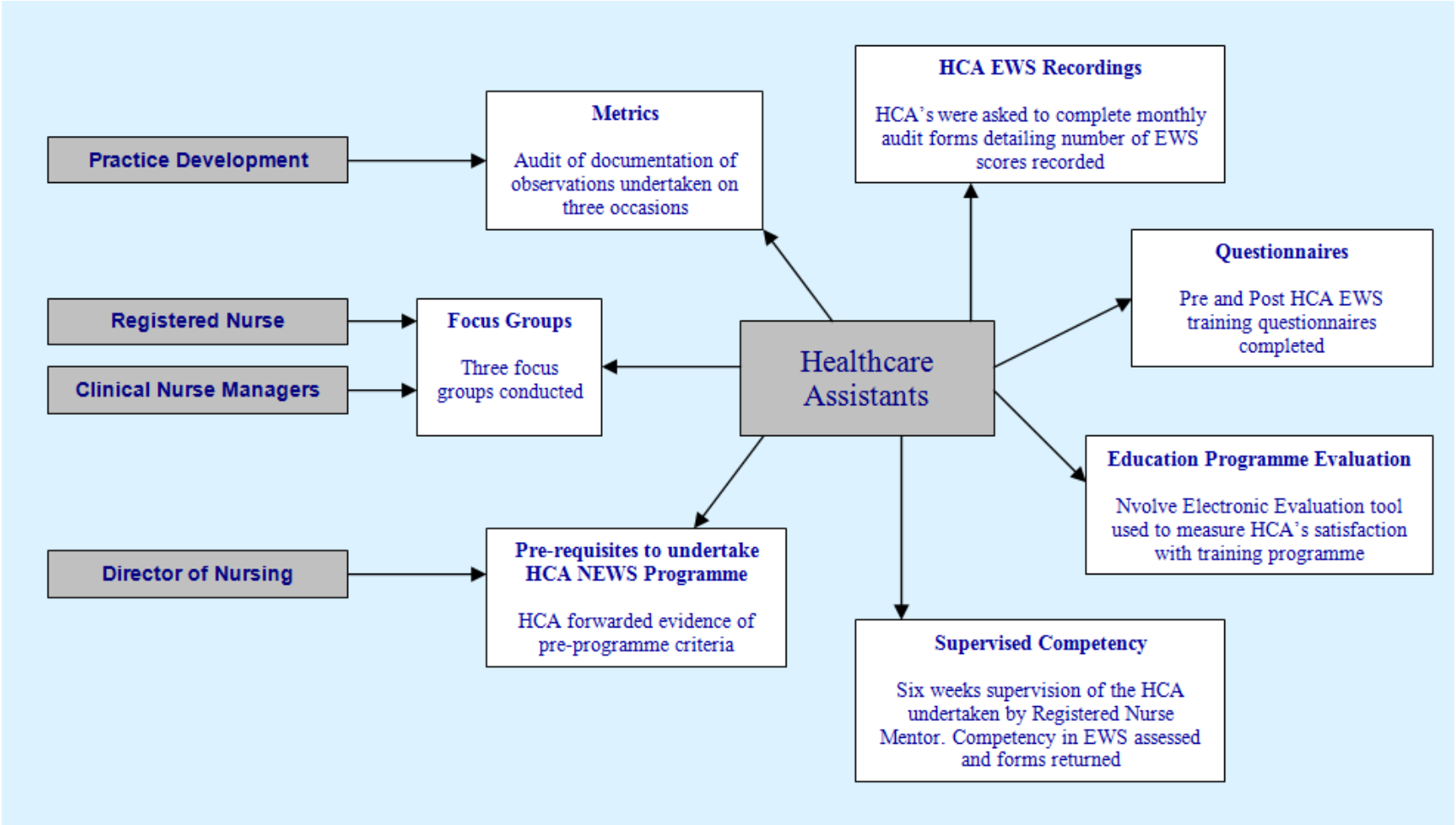
A Logic Model's Inputs comprise all relevant resources, which included time to plan and implement project; Funding sources included facilitators time to deliver HCA-NEWS education programme; Time for HCA to attend programme; printing documentation stickers for HCAs to record EWS in clinical practice; RN time to support and supervise HCA; Time for staff from Practice Development to update clinical policies to support the RN and HCA in practice and time for their team to undertake Metrics; and finally gaining support from the DON to confirm commitment to providing the resources required.

Table 2: Evaluation using Logic Model

Objective	Evaluation
Input: To identify resources required to implement project	Meetings with key stakeholders to gain commitment to providing the resources required for project
Input: To identify HCAs who meet the national criteria to undertake training in HCA NEWS education programme	An audit of HCAs who met the criteria undertaken by DON and ADON/SM and CNMs. 13 HCAs out of 34 met the pre requisites
Activity: To ascertain HCAs perceptions of undertaking training in HCA-NEWS programme	A pre training questionnaire was sent to 13 HCAs who met the criteria to undertake the programme working within the Medical Department
Activity: To provide a training programme on HCA-NEWS to HCAs working within the Medical Department of an Acute Hospital that is 100% consistent with the National training programme	The National HCA-NEWS education programme provided on 3 occasions to 3 groups of HCAs working within the Medical Department. Education Training programme evaluated to ascertain participants satisfaction
Output: Develop local policy with Practice Development to support HCA in practice **Output:** Procedures and Assessment Process **Output:** HCA to complete a period of supervised practice prior to assessment and skills competency being assessed by A RN mentor	Existing policy on Delegation to HCA reviewed and developed to include HCA-NEWS. Policy reviewed and adopted by the Policy Procedures and Guidelines committee in February 2015 Assessment Process developed nationally and adapted locally to include assessment on a final total EWS. HCAs completed six weeks supervised practice and assessed by a RN as competent in measuring, recording and communicating a patients vital signs and totalling a patients EWS. Completed assessment and skills competency record sent to DON office to be kept on file
Outcome: To evaluate the perceptions of HCAs post training programme	A post questionnaire given to HCAs who undertook training and who were undertaking the HCA-NEWS in clinical practice 8 weeks after initial training
Outcome: To evaluate the impact of the project through capturing the experiences of both HCAs and key Stakeholders	Focus group interviews conducted separately with 3 groups HCAs, RN Mentors and CNMs
Outcome: Audit of Reporting total EWS **Outcome:** Audit of documentation of EWS observations	HCAs completed an audit of 2 months reporting and communicating EWS undertaken. Audit of documentation on EWS observations carried out by practice development staff on three occasions using the nursing and midwifery Quality Care metrics tool
Impact: Benefits to participants	CNM and RN satisfied in delegating NEWS to HCA. HCAs competent in undertaking EWS as delegated by RN

The writer focused on data collection activities and subsequent outcomes to organise and interpret the data from multiple methods such as pre and post questionnaires, focus groups and sources such as audit, using the nursing and midwifery Quality Care metrics tool within an integrative framework. A summary of the data collection methods used in the project are illustrated below (figure 7) each of which will be discussed in the results section.

Figure 7: Summary of the data collection methods utilised in this project



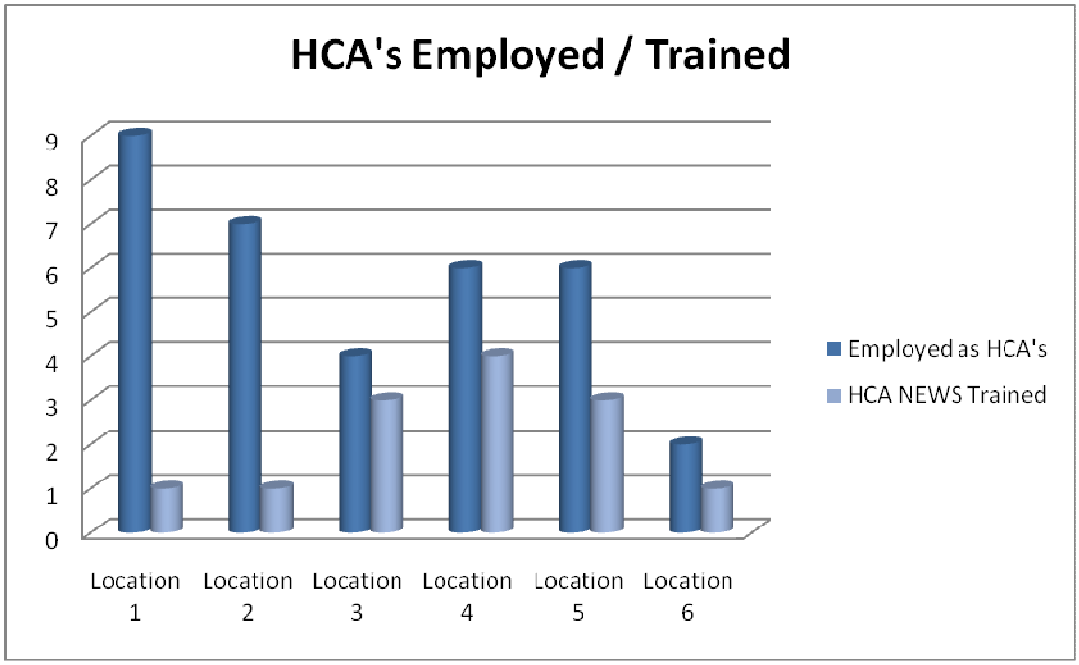
4.4 Results

4.4.1 Audit of Prerequisites to attend HCA-NEWS Education Programme: Input component of logic model (table 2)

An Audit of criteria required by the HCA was undertaken in collaboration with the DON and Senior Nurse Management Team (appendix 3). The criteria were set as a national prerequisite to attend the education programme.

In the six medical wards a total of 34 HCAs are employed. However, only 13 HCAs met the criteria to undertake the HCA-NEWS training education programme (figure 8). Further investigation is required locally to understand the issues that may prevent HCAs from availing of education programmes on offer.

Figure 8: HCAs Employed versus HCAs Trained



4.4.2 Questionnaires

Pre Questionnaire: Activity component of the logic model (table 2)

Post Questionnaire: An Outcome component of the logic model (table 2)

Questionnaires allow for collation of both qualitative and quantitative data. A pre questionnaire was designed to firstly establish the HCAs perceptions of undertaking training in the HCA-NEWS programme and secondly to assess the culture in the participants perspective teams. The post questionnaire (appendix 8) was distributed to establish the HCAs perspective of undertaking the delegated role of EWS and to establish the confidence and the commitment of the HCA going forward. Both the pre and post questionnaires were completed by all participants (100%, n= 13). The results are presented in the following sections.

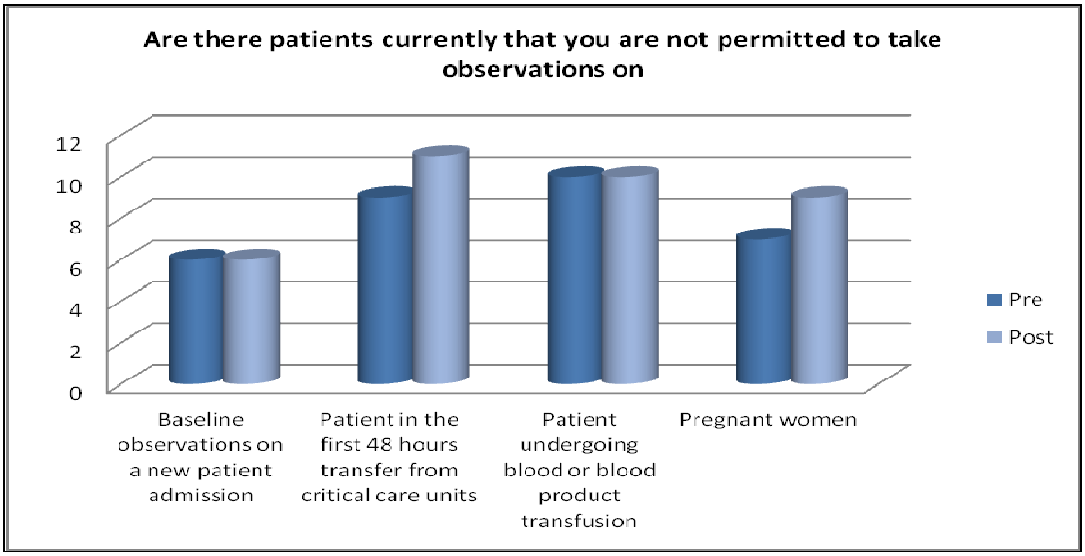
All participants have been employed as HCAs for a minimum of 5 years with 46% of these employed for over 11 years. All HCAs report to the RN. Pre attending the education programme in HCA-NEWS 31% of HCAs strongly agreed that they felt part of the nursing team whereas 69% agreed. Post implementation of the initiative this increased to 54% of HCAs strongly agreeing that they felt part of the nursing team with 46% agreeing. The integration of the HCA into the ward team will assist the nursing team to work collaboratively to ensure the care the patient receives is person centred and that each member of the team is valued and respected. All HCAs reported that they attended report and that patient care

issues were communicated to them at this time. 70% of participants reported that the RN reinforces patient care issues on a one to one basis. This further demonstrates integration, collaboration and team working.

4.4.3 Delegation

Participants were asked; *if they were currently delegated the task of measuring and recording a patient's vital signs?* The majority of participants (69%, n=9) indicated that they were currently delegated the task of measuring and recording a patient's vital signs. However, in the post questionnaire 100% of HCAs indicated that they are now delegated this task. When asked; *who delegated this task to them?* 100% of participants responded that the RN was the delegator. The HCAs were asked; w*hich patients they were not permitted to take observations on?* In their response they could tick more than one option. Pre survey one participant believed that they were permitted to take observations on all patients whereas post survey there was a greater awareness of those patients that HCAs are not permitted to take observations on (figure 9). There is disparity in the results highlighting that the HCA was being delegated the task of taking a patients vital signs on occasions when they were not permitted to do so according to local delegation policy and guidelines. There needs to be a greater awareness at ward level of the delegation policy and guidelines that clearly state the patients that the HCA is not permitted to take observations on. The HCA requires ongoing monitoring and supervision of their work in order to maximise and further develop their contribution to patient care and to patient safety.

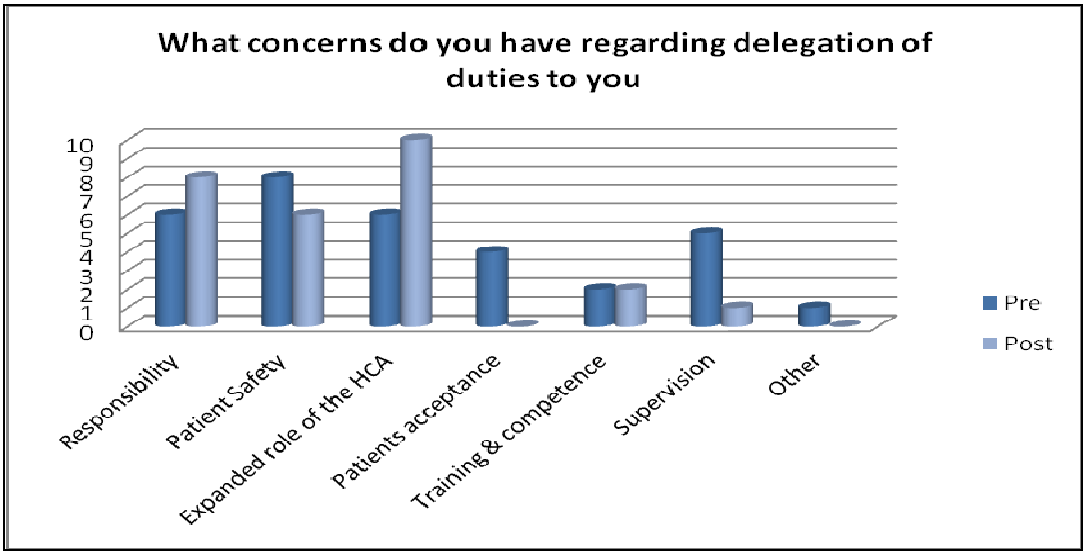
Figure 9: Are there patients currently that you are not permitted to take observations on?



What concerns do you have regarding delegation of duties to you?

The participants were asked what concerns they had regarding delegation of duties to them; again in their response they could tick more than one option. The results indicate that 77% of HCAs had concerns about the expanded role of the HCA, a further 61% had concerns about responsibility and 46% indicating that patient safety was of concern to them.

Figure 10: What concerns do you have regarding delegation of duties to you?



4.4.4 Accountability and Responsibility

The participants were asked two open ended questions; *who they were accountable to and who was responsible for their practice?* All participants believe that they are accountable to the RN with some recognising that they are accountable to the patient and to their employer. The majority of HCAs believe nurses are responsible for the practice delegated to them and HCAs are responsible for their own practice. Beaumont *et al* (2008) highlight that nurses are responsible for patient monitoring and leadership is required to emphasise the significance of monitoring to HCAs to ensure appropriate and immediate action is taken. Flood et al (2008) in their national review of the role of the HCA in Ireland expressed concerns re the legal responsibilities of nurses/midwives when delegating to or supervising HCAs. Moreover, The Francis report (2013) recommends that HCAs should be subject to registration before being allowed to practice. However, HCAs in Ireland are not currently on a professional register.

4.4.5 Energy for change - Post Questionnaire

How confident are you that you will be able to apply what you have learned in practice? The participants were asked to circle one rating which fell on a line continuum where 0 was not at all confident to 10 being extremely confident. If the HCA circled 6 or lower, they were asked to answer a further question to determine the reason they felt that their confidence was not high. One participant circled 5 the reason cited being that they felt that they didn't get the

time to practice the skills. The majority of the HCAs 92% (n=12) suggest that they are confident in applying what they have learnt in practice.

How committed are you to applying what you learned to your work?

The participants were asked to circle one rating which fell on a line continuum where 0 was not at all committed to 10 being extremely committed. If the HCA circled 6 or lower, they were asked to answer a further question to determine the reason they felt that their commitment wasn't high. One participant circled 5 and gave the following reason (g) I am not rewarded or recognised for doing this. The reason cited *'I feel singled out because not all HCAs have to do them' (HCA).* The remaining twelve HCAs all agreed that they were committed to applying what they had learned to their work.

4.4.6 Team Culture

Culture can be defined as 'the way we do things around here' (Drennan 1992 p.3; McAuliffe and Van Vaerenbergh 2006 p. 68) and can be reflected in the values, beliefs and assumptions held or accepted by staff in the workplace (Manley *et al.* 2011). The team culture tool used in the questionnaire (appendix 14) by Pritchard and Dewing (2000) was used to enable the HCA to think about their team culture. From the results the participants could gauge if the culture of the team is fragmented or if a transformational culture is apparent. The participants were asked to read 12 statements about the culture of their teams and circle one rating between 1 and 5. Scores that are closer to 5 indicate a team

that has shared vision, a sense of openness, willingness to learn and is future focused –this is an integrated team. Teams with low scores tend to be segmented (Pritchard and Dewing 2000). The findings post implementation of the HCA-NEWS in clinical practice demonstrates that the majority of HCAs identified a significant improvement in their teams' culture in embracing change and having strong coordination within the team. The findings also show that one HCA noted tensions within their team highlighting individuals operating alone, conflict and disagreement in the team. Fundamental to any culture are the values and beliefs displayed as attitudes and action by staff. Nilsson *et al*. (2012) argue that it is essential to address staff attitudes in order to facilitate change. The scores are subjective rather than absolute and are conducive to the findings from the focus groups.

4.4.7 Six Week Supervised Practice with Competency Assessment and Skills Demonstration

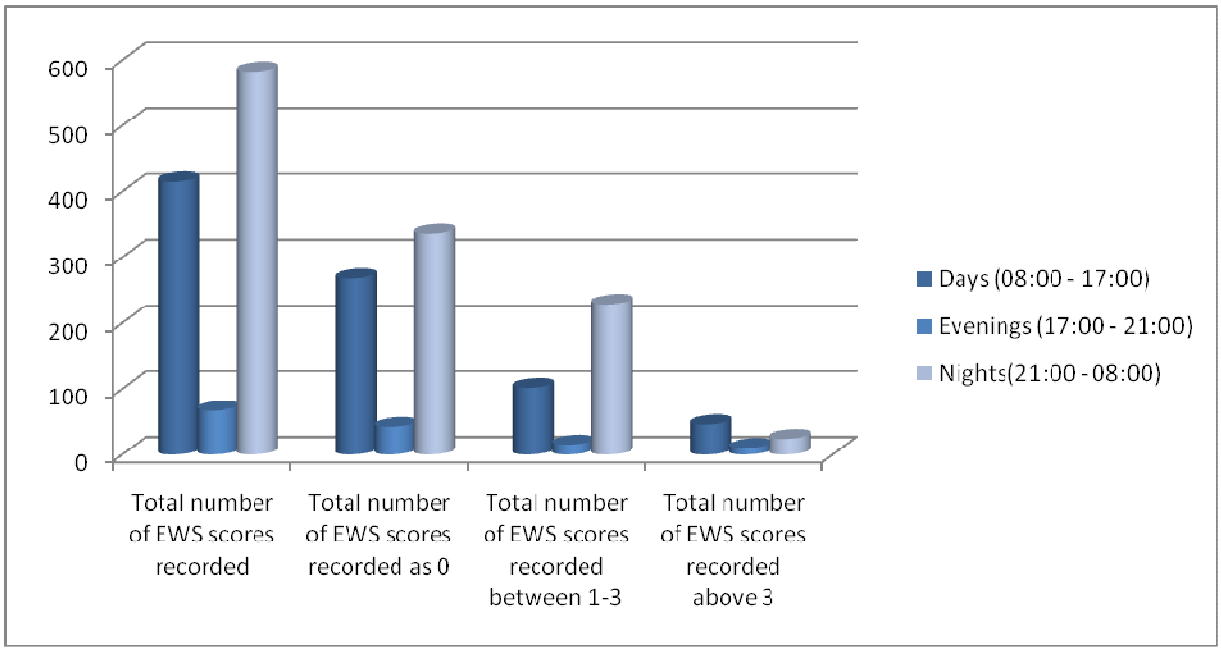
To assess changes in the learner's behaviour the HCA on completion of the HCA-NEWS Education Programme and on return to the clinical area was supervised by an RN mentor for a period of six weeks. Each HCA was assessed as competent on ten occasions by an RN mentor with 92% deemed competent in HCA-NEWS. The aim being to ensure the provision of a safe, quality service delivered by HCAs, who are supported to engage, participate and develop their skills prior to being assessed as competent in measuring, recording and communicating a patients vital signs and totaling a patient's EWS. A copy of

completed assessment and skills competency record was sent to DON office to be kept on file. Twelve HCAs successfully completed the assessment and skills competency component of the programme (appendix 12). They are now capable in measuring the vital signs and totaling an EWS as delegated by the RN under the revised delegation guideline.

4.4.8 Audit of EWS Recordings

HCAs maintained a self-audit each time they measured and recorded an EWS (appendix13) for a period of two months Their EWS findings were recorded, reported and communicated to the RN using the ISBAR communication documentation. The communication documentation was placed in the Nursing documentation using the HCA-NEWS ISBAR Record of Documentation and Communication stickers (appendix11). The results of the self-audit are highlighted in the graph below. The findings illustrate that over a two month period 1065 vital signs and EWS were undertaken by the HCA in the clinical areas. The majority of EWS were undertaken on night duty by the HCA. During the day fewer opportunities presented for HCAs to undertake NEWS as student nurses are competing to practice their skills. The total number of EWS scores recorded at zero was 646. The total number of EWS recorded between one and three showed 346 recorded and reported to the RN. The total number of EWS scores recorded above three totalled 80.

Figure 11: Self-Audit of EWS Recordings



4.4.9 Focus Groups

Focus groups play a valuable role in both research and in the involvement of people in organisational change (Webb 2002). To generate data focus groups use a group interaction process, in recognition that group dynamics enable participants to express and clarify their views (Krueger and Casey 2009). Focus groups were utilised as a source of data collection which would support the experiences of all three groups (HCAs, RNs, and CNMs) following implementation of the HCA NEWS in the medical department. Three separate focus groups were planned as the literature has demonstrated that different hierarchical levels within a group should be avoided (Joyce 2008) as participants may be hesitant to contribute to the discussion if a power disparity exists (Mansell et al 2004). Three focus groups interviews were planned following the

six week supervision period of the HCA to practice and develop their clinical skills with the support of their RN mentor. The sample for group 1 was drawn from fifteen RN mentors working in the medical wards. Letters of invitation were issued to all RN mentors on each unit, explaining the purpose of the project and inviting expressions of interest to participate in a focus group. A consent form was included to obtain written consent. It was made explicit to participants that note-taking and recording the discussions was to be employed. A period of four weeks was given for potential participants to respond by email, letter or telephone. A total of six responses were received. However, the final sample comprised only four of these nurses with the fifth nurse sending apologies and the sixth nurse turning up at the end of the interview.

The sample for group 2 was drawn from ten CNMs in the medical units. The same process was used as in group 1. A total of six responses were received, one from each of the six areas. However, the final sample comprised of four CNMs with the fifth and sixth CNM sending apologies.

All 13 HCAs who participated in the project were invited to attend the third focus group and written consent was obtained. A total of 12 responses were received from the HCAs with eleven attending the focus group. None of the HCAs, RNs or CNMs was excluded from attending the focus groups.

The dates, times and location of all three focus groups were sent by email to the CNMs in order to enable them to plan and facilitate release of participants to attend on the specified dates. Consideration was given to Patton's (1987) six types of questions that can be asked during an interview which should be open ended, neutral, sensitive, and clear to the participants: those based on experience or behaviour, on opinion or value, on feeling, on knowledge, on sensory experience and background or demographic to understand the context in which the participant is participating (appendix 9).

The principle investigator acted as the moderator of the focus group interviews and a colleague acted as scribe. Recognised as providing rich data and insights into people's experiences (May 2008) interviews were used to encourage each group to discuss their thoughts and experiences. Issues of confidentiality were explained by the moderator and agreed. Introductions were made and the session plan outlined. Recording of interview data was achieved using digital recording equipment. The interviews were expected to last approximately one hour. The findings were transcribed and interview data analysed using thematic analysis.

4.4.10 Focus Group Findings

The focus groups generated a cornucopia of narrative data. The findings of which are presented under the three themes extracted from the thematic analysis.

1. Team working
2. Communication

3. Skill mix

Table 3 presents a summary of the overarching themes and subthemes that emerged from the focus group feedback.

Table 3: Overview of themes and sub themes

Theme 1: Team Working	Theme 2: Communication	Theme 3: Skill Mix
• Workplace Culture • Resistance to Change • Integration of HCA • Benefits to Patient/RN/HCA • Supervision • Delegation • Job Satisfaction	• Reporting • Documentation • ISBAR tool • Supervisory • Practice	• Resources:Staff Ratio • Student Nurses • Deployment of HCA • Recognition of HCA with recognised qualification (FETAC/QQI FET)

4.4.10.1 Team working

The role of the HCA is perceived as more beneficial to the Healthcare Team as findings show that HCAs are more directly involved in the delivery of patient care.

> *I find that the HCA is coming back to me at times when they are doing the vital signs to tell me that the patient is not looking good and I am doing the medication round so I know to close the trolley and go to the patient immediately. They are picking up that the patient is deteriorating quicker. (RN)*

> *It improves teamwork and the main focus is to deliver better patient care, as a RN it gives me more time to spend with ill patients and I find that the ward is more efficient. (RN)*

Both the CNM group and the RN group reinforced the value of the HCA as a member of the healthcare team. The HCAs reported a great sense of satisfaction from doing a complete set of patient observations and reporting the total EWS to

the RN. They felt empowered and enabled and this in turn contributed to a positive team working environment.

> *At first I found it very frightening on how responsible I will be, but we work as a team on the ward (HCA)*
>
> *An accurate recording of EWS is essential to determine if a patient is becoming unwell (HCA)*

One HCA observed

> *I have been here 15 years and I see how the role of the nurse has changed so it only follows that the role of the HCA changes with it (HCA)*

Benefits to HCA

All of the HCAs agreed that they felt more knowledgeable, educated and were more diligent in undertaking the skills. They commented that in doing the training and subsequent supervision this had created more awareness of the importance of undertaking the patient's observations and totaling a EWS.

> *I realise how important our role is and how important the EWS is. (HCA)*
>
> *You're more knowledgeable. You're being more diligent because you have to concentrate. You become more conscious of the importance of taking the obs and totaling a EWS. (HCA)*

Benefits to RN

All of the participants were positive about the benefits derived from HCA involvement in doing the patient observations and EWS.

> *It's nice to know that you are more of a benefit to the RN when the pressure is on, you can do something to help them out (HCA)*
>
> *When the RN is doing the drug round or they are looking after a really sick patient you can help them by doing the obs on other patients (HCA)*

There is more communication; teamwork and less pressure on staff nurse (HCA)

Some focus group participants reported that the HCA-NEWS initiative had a positive impact on staff. They mentioned that it made staff more observant and more aware:

Time is a huge benefit to us, I appreciate the HCAs awareness of the vital signs, it is like having a second pair of eyes it is making them more aware of the patient and they are watching the patient more closely (RN)

Benefit to the Patient

All participants agreed that the benefits to the patients were mostly found on night duty where they felt that the night duty role is more clearly defined. The HCAs are enabled to utilise their skills developed from the HCA-NEWS and from undertaking the FETAC Level 5 programme. The HCA also identified that patients were able to get to sleep earlier and they were able to report to the RN if a patient's condition had deteriorated from totaling the EWS in a timely manner.

We have found that the patients get settled earlier (HCA)

You might find a patient who has become sick when you are doing the obs that the RN might not know this until s/he gets to that room if they are doing the drugs so you can go to the RN and let them know and the patient's care is escalated (HCA)

However, there were noted tensions within some teams. One HCA was particularly frustrated at being the only trained HCA on one of the wards. This HCA finds that because of skills development they are being delegated more and

more responsibility whilst peers are seemingly being underutilised. The lack of support from colleagues can be identified as one of the main barriers to introducing a change in practice (Manley *et al* 2011). The HCA expressed

> *Something I feel very annoyed with is the amount of HCAs on the ward that are not trained, some of them are fifteen years plus working on the ward and who is it falling down to the people who have been on the FETAC course.*
> *When I look at colleagues that I work alongside and compared to what I'm doing and I am the one being called on could you do this and could you do that and what are they doing when I'm doing that, very little. That's very unfair (HCA)*

However, other participants reported that all the HCAs on their ward were all FETAC trained, and had clear responsibilities each of who were assigned to work on different shifts.

> *There are four HCAs on our ward and there is only ever one of us working on one shift so it is never a case of your doing it and I'm not. There is no difference. (HCA)*

This highlights the importance of staff having clear expectations, clear responsibilities and role clarity that are recognised enablers to an effective workplace culture within teams (Manley *et al*. 2011).

Overall the HCA felt that they were encouraged, empowered and involved regarding their involvement with monitoring and recording vital signs and totaling a EWS.

> *I have more knowledge. I am more competent and confident. (HCA)*

Participants expressed that this provided them with further opportunities to provide direct patient care and that a greater amount of time was spent communicating with the patient, therefore offering further opportunities for caring.

> *I find that I am spending more time with the patient so you're talking more to the patient* (HCA)

4.4.10.2 Communication

Recording and Documentation

Documentation of vital sign measurements was found to be highly variable within and between the six locations. Transcription of information into the nursing documentation was predominantly undertaken by the RN. The HCAs all reported the patient's observations to the RN. Whilst the HCA recorded the vital signs on the patient observation chart the majority of HCAs did not document their findings into nursing documentation instead they transcribed their findings onto a sheet of paper and handed this to the RN. Some HCAs reported their findings verbally to the RN. Gearing *et al.* (2006) noted that transferring information from one medium to another contributed to an increased number of documentation errors. Furthermore they found that the additional time spent transcribing impacted on time for other patient care activities. Findings from Yeung *et al.* (2012) suggest that removing the barriers to documenting patient's observations can result in a reduction of errors leading to increased patient safety and in a more timely medical review and treatment of patients. Accurate and timely documentation of vital signs is critical for the prompt identification of a deteriorating patient.

To address this issue and to improve the effectiveness of team communication the HCA was introduced to and trained in the use of the Identify-Situation-Background-Assessment-Recommendation (ISBAR) communication tool as advocated for use in the Irish Healthcare system.

> *The ISBAR will be very helpful when dealing with a variety of situations from patients to nurses; it's good to know how to report back to the RN with this. (HCA)*

A system for the HCAs to report findings to the RN and to document patients EWS in the nursing records was developed in Tallaght Hospital and permission was sought and granted to reproduce this locally. Each HCA involved in the project was asked to complete an individual report sheet (appendix 11) to communicate their findings and when both the HCA and the RN to whom the findings were reported to both signed the report sheet this was then placed in the nursing record. The report sheet was designed to be printed on a sticky back paper and this was then placed in the patients nursing record.

> *Using the stickers to communicate the patient's observations will lead to more accurate responses. (HCA)*

Consistent team communication skills are essential to avoiding adverse events within health care settings.

4.4.10.3 Skill Mix

Deployment of HCA and Resources: Staff Ratio

All three groups acknowledged where there is staff shortage staff are deployed to cover other areas. One of the CNMs found this frustrating as this affects planning the Rota and skill mix for each shift resulting in compromising the skill mix.

> *I have four HCAs who are all trained which is great but my issue is in some areas where there is a staff shortage and one of my HCAs who are trained in FETAC is taken to another ward. I understand that staff can get moved about but then in return I will get somebody who is not FETAC trained. It can be quite frustrating if you do your off duty and you cover your ward with someone who can be a support to your nurses on night duty. This is frustrating as I have planned the Rota with the skill mix for each shift and this causes an imbalance. (CNM)*

Deployment of the HCA caused concern for two other CNMs who claimed that

> *There is an issue with HCAs being moved because they are finding now that they have gone an extra step and done the training many feel that they are penalized because they have to move to another area. (CNM)*

> *It's not an incentive for anyone who has to do the FETAC level 5 training because they realise then that if they do the training they would be moved. So you know if you have someone that you are trying to encourage to do the FETAC where is the encouragement then because they can see the other HCAs being moved as they have done the training. (CNM)*

The HCAs referred to being moved as a challenge. They expressed concerns in relation to being moved only because they were trained in EWS.

> *What we're finding now on night duty especially is that it is being used now to move you. I was moved two out of three nights because I am doing the EWS and an agency person was put in my place. (HCA)*

> *Every night I come in I know that I will be moved as soon as I have the obs done on my ward, 90% of the time I will be moved just because I have the skills now. (HCA)*

Two of the CNMs discussed their respective areas where one area does not have a HCA on night duty and both CNMs found that a RN is constantly being moved and replaced by a FETAC trained HCA. All CNMs found that this impacts on staff morale. They all agreed that staff are really frustrated with the moves.

> *Staff are really frustrated. I would always find out the reason why they were moved to find a particular ward has lost a nurse to go to another area because of sick leave and is replaced by the FETAC HCA to cover. This has a knock on effect on all the areas but it doesn't take away the fact that I'm concerned with my area and doing the off duty as best I can. (CNM)*

The HCA reported that they had a series of duties to fulfill and when deployed to work in another area of the hospital they found that on their return to their own department they had to complete these assigned duties for e.g. cleaning duties and stock control.

> *When you do get moved the person coming to fill your post doesn't do any of that so then you get into bother for not doing the check lists or if the orders are not done (HCA)*

The organisation of nursing and non-nursing care is a local issue but effective team communication is the cornerstone to successful utilisation of the HCA. As one CNM stated

> *I can do anything a HCA can do but they can't do everything I can do. (CNM)*

Delegation

A discussion took place around the importance of when to delegate the EWS to the HCA and the awareness that staff could become complacent over time.

> *Delegation should not be abused. Staff need to be careful as it can become a task. We need to ensure we act on scores and not become task oriented. (RN)*

It is important that there is trust in the HCA and that they don't over time become complacent. (RN)

It's managing the workload, prioritising, making sure that the right patient has the right person caring for them. (CNM)

These findings echo McBride *et al*'s (2005) study highlighting there is a risk that staff may become complacent about the importance of monitoring which may lead to incomplete and irregular vital signs recording. Furthermore, nurses should consider carefully whether it is appropriate to delegate the monitoring of vital signs to the HCA.

4.5 Nursing and Midwifery Quality Care Metrics

The use of the Nursing and Midwifery Quality Care Metrics tool provides transparent evidence in order to assess standards and performance of individual wards and services to monitor care and promote a culture of quality and patient safety to improve the quality of care delivery (HSE North West, 2014).

An audit of documentation on NEWS observations was carried out by practice development staff in the six locations on three occasions using the Nursing and Midwifery Quality Care Metrics tool (appendix 15). The audit included evidence of the following metrics on the NEWS /adult patient observation chart

- Patient's name and identification number recorded
- Vital signs were taken at a minimum 12 hourly
- NEWS was recorded using the 24hr clock and date recorded
- All vital signs recorded

- NEWS score totalled on each occasion
- Increased monitoring.

Examination of the data shows strong adherence to criteria relating to observation of vital signs being taken twelve hourly on patients but poor adherence in regards to recording all NEWS and observations of respirations, pulse, blood pressure, temperature, oxygen saturations, and Level of Consciousness. Monitoring of the patient observations and EWS tended to occur at specific times of the day this suggests a task-orientated approach supporting the findings of both Hogan (2006) and Wheatley (2006). Results obtained in March show 4 locations achieved 100% indicating an increase in monitoring of the patients vital signs. The accuracy with which EWS are calculated and charted support the findings of Prytherch (2006) and echoes Cuthbertson et al. (2007) findings re inaccuracies and miscalculations related to manual data collection. Healthcare professionals not recording all the physiological parameters which could put the patient at risk was highlighted (Preston and Flynn 2010). Team members need to understand the impact their action or inaction will have on eventual patient outcomes. Measuring outcomes of care undoubtedly lies in every member of the team being responsible for the part they play in what happens to patients (Slater 2013).

4.6 Dissemination Plan

The project served as an initiative for the acute hospital. Dissemination of findings will be presented at the Senior Nurse Management team meeting and at

the medical clinical directorate specialty meeting which includes all the CNMs of the participating medical wards. Additional dissemination will occur through presentations at relevant conferences, regionally and nationally, and through articles published in peer-reviewed journals.

4.7 Summary and Conclusion

This chapter provided a discussion on the significance of evaluation and presented a range of models of evaluation, considering the theories that influenced their development. The rationale for choosing the Logic Model of evaluation was offered. By using the logic model the writer has demonstrated that the HCA-NEWS project has been implemented in practice and is working. A summary of the data collection methods utilised in this project was presented prior to focusing on data collection activities and outcomes. The data was organised and interpreted from multiple methods and sources such as pre and post questionnaires; focus groups and audits. Overall the evaluation reflects that the aim and objectives of the OD project were achieved.

5. Discussion and Conclusions

5.1 Introduction

The aim of this project was to implement the HCA-NEWS on six medical wards in an acute hospital. A literature review was undertaken and themes discussed. Using the HSE change model as a framework the writer demonstrated the processes used to initiate, plan, implement and evaluate the OD change in practice. The Logic model was used to evaluate the effectiveness of the project and Kirkpatrick's 4 level evaluation model; levels 1 and 2 were used to determine HCAs reaction to the education programme and the effectiveness of learning. This chapter provides a discussion on the findings. The writer will present a review on the impact of the project before examining the strengths and limitations of the OD project. A list of recommendations for consideration in the future will be made. The chapter will end in outlining a summary and conclusion.

5.2 Project Impact

With the introduction of any expanded role it is imperative that staffs are cognisant of their accountability and aware of the positions of responsibility of the role. Patient observations provide important information about the condition of an individual patient and can provide early warning of acute deterioration. HCAs are increasingly providing direct patient care in hospitals and are often delegated the skills of undertaking vital observations in ward environments. Following attending the national HCA-NEWS education programme and subsequent six

week period of supervision HCAs undertaking observations have acquired the knowledge and skills to undertake accurate measurements of respirations, pulse, blood pressure, temperature, oxygen saturations, and Level of Consciousness (AVPU). To ensure patient safety HCAs that are delegated patient observations must be fully educated and competent to do so. The importance of education and development for all staff is clearly recognised.

The findings from this project have shown that implementing the HCA-NEWS has been positively received in the medical department. The use of the NEWS needs to be utilised correctly and appropriately to ensure patients at risk are identified early and receive appropriate treatment by the right practitioner at the right time. Despite having clinical protocols in place, the findings from the nursing and midwifery quality care metrics on the recording and documentation of EWS in this dissertation support the literature that staff can fail to follow them by not increasing the monitoring of a patient with an increased EWS score. Further studies are required to comprehend local cultural and interprofessional issues that may prevent staff from increasing the monitoring of taking and recording patient observations and acting upon them (Hands *et al.* 2013)

5.2.1 Stakeholders

Following the implementation of this project the majority of HCAs felt empowered and enabled and this in turn has positive benefits for team development and integration. HCAs expressed that the HCA-NEWS has provided a further

opportunity to engage directly with patients and provide support to the RN. The RN reinforced the positive aspects of the enhanced HCA role, team working and the impact on patient care.

As indicated by MacLeod and Sharkey (2013) successful, safe, and efficient health care is delivered through a complex maze of effective relationships. Communication is an underpinning aspect of ensuring patient and staff safety. The importance of effective communication within health care has been highlighted throughout this project. The process of communicating with all stakeholders reduced the risk of resistance and increased the sense of ownership by all staff. Therefore, awareness of team dynamics and communication are essential for creating a culture of safety and supporting the safe delivery of patient care. The findings demonstrate how the relationship between team members can result in mutual support and team strengthening for those involved. They show how collaboration between team members can contribute to a positive work environment and enhanced care for patients.

However, this project also highlighted the challenges experienced by teams including the frustration of staff being deployed to other areas which affected the skill mix within the workplace. Workplace culture refers to how things are thought about and done by those within it and in how they respond to changes (RCN 2007). In healthcare settings culture has been found to impact on the motivation, commitment and effectiveness of staff (Manley *et al.* 2011). Within the right

environment and with the right enablers, effective change can start and spread at any level of an organisation. Patterson *et al.* (2011) suggests that cultural change is facilitated through leadership. The key processes of a transformational leadership approach include developing a shared vision, inspiring and communicating, valuing others, challenging and stimulating, developing trust and enabling (Bate 1995; Kouzes and Posner 1987). A transformational leadership approach is key to effective cultural change one which supports transformation of teams, practices and people (Bate 1995). Effective cultures that have engaged leaders fostering a culture of high valued care are recognised by teamwork; productivity; safe care; and continual improvement in response to a changing healthcare context (Manley *et al.* 2011).

5.3 Strengths of the project

One of the main strengths of the project was evident in the increased involvement of the HCA in providing direct patient care. The HCA have gained an additional skill. They are confident and committed to applying what they have learned to their practice.

Secondly the HCAs trained are deemed competent safe and dependable in undertaking the HCA-NEWS. This was evident in the supervisory period of practice of the HCA by the RN. The aim of the supervisory period was to ensure the provision of safe, quality service, delivered by employees who are supported, engaged and participate in continuous development. There was a clear

understanding between all participants regarding the period of supervised practice and support to the HCA in undertaking the skills practice demonstration and being assessed as competent. This has resulted in improved communication between the RN and the HCA. It is envisaged that this engagement will ensure clarity of roles and responsibilities and create structured opportunities to discuss work, review practice and progress and plan for future development of the HCA.

Thirdly, most participants expressed the belief that the project work brought with it a participative atmosphere that created a more inclusive team with the HCA becoming more involved in teamwork.

5.4 Limitations of the project

On reflection this project has few limitations. The project was confined to HCAs working within the medical department of the hospital who met the pre-requisite national criteria. The duration of the project was short therefore to fully embed the HCA-NEWS in practice and sustain momentum will require ownership and participative management by all stakeholders.

5.5 Recommendations

It is recommended that:

1) The RN continues monitoring and supervising the HCA to demonstrate, develop and maintain competency in undertaking, recording, totaling, and communicating a patients' vital signs and EWS. This will ensure that skills are maintained and are embedded in safe practice.

2) A review of the effectiveness of the HCAs role in undertaking the skill of HCA-NEWS is completed at local and national level.
3) Continuous evidence in the workplace to demonstrate that:
   - Patients needs are the priority and patient centred care is evident
   - Staff are empowered and committed
   - Policy, protocols and guidelines is adhered to
   - Quality Standards and goals are achieved (individual, team, organisational effectiveness)
4) Ongoing audit and evaluation should continue to determine
   - Totalling of EWS and the completeness of observation charts
   - That patients have a minimum of 12hourly observations recorded
   - Increased monitoring as per clinical protocol is adhered to
   - That the skill has been undertaken by the right person in accordance with the patients' condition
5) Standardisation of HCA's recording and documenting clinical practices in nursing documentation and patients' charts is used to record patient information.
6) There is a need for all HCAs to be trained to the same level to maintain standards and ensure clarity of roles and responsibilities.

5.6 Summary and Conclusion

The changing roles of the RN have direct implications for the role of HCAs. As the RN assumes extra responsibilities and expansion of roles they are surrendering part of their role to the HCA. HCAs have a valuable contribution to make to patient care (Kessler *et al*. 2010). However care is delivered with sometimes little or no supervision and there are no minimum standards of training or competence. The RN needs to ensure that HCAs have the knowledge, skills, and competence to undertake the delegated tasks, taking into account the individual's own confidence and experience. The provision of support for HCAs to undertake training is important. The key to promoting patient safety is to ensure that HCAs are trained and competent to undertake the tasks delegated to them, and that accountability is clear (Bosley and Dale 2008).

Overall the project contributed to patient centeredness and to patient safety. Everyday challenges were highlighted and more profound aspects of caring emerged throughout this process. NEWS should be evaluated locally and nationally, the success of which will lead to a reduction in clinical incidents, strengthen accountability, improve teamwork and ultimately deliver a safe, effective, caring, healthcare service. This coupled with evidence of good organisational support for trust, empowerment, respect and supervision will contribute in embedding the HCA-NEWS in practice.

6. References

Ancona D (2009) *Leadership in an age of Uncertainty*. Research Brief MIT Leadership Center. Available at: http://mitleadership.mit.edu/pdf/LeadershipinanAgeofUncertainty-researchbrief.pdf

Andrews T and Waterman H (2005) Packaging: a grounded theory of how to report physiological deterioration effectively. *Journal of Advanced Nursing* 52 (5) 473- 481

Amason A (2010) *Strategic Management: From Theory to Practice*. Routledge, London

Bate P (1995) *Strategies for Cultural Change*. Butterworth-Heinemann, Oxford

Beaumont K., Luettek D., Thomson R (2008) Deterioration in hospital patients: early signs and appropriate actions. *Nursing Standard.* 23 (1) 43-48

Beer M., Eisenstat RA., Spector B (1990) *Why change programs don't produce change.* Harvard Business Review 1990 (November–December), 4–12

Bleyer AJ., Vidya S., Russell GB., Jones CM., Sujata L., Daeihagh P., Hire D (2011) Longitudinal analysis of one million vital signs in patients in an academic medical center. *Resuscitation*. 82 (11), 1387-92.

Bosley S and Dale J (2008) Healthcare assistants in general practice: practical and conceptual issues of skill-mix change. *British Journal of General Practice* 58 (547) 118-124

Buist M., Jarmalowski E., Burton P.R., Bernard S.A., Waxman B.P., Anderson J (1999) Recognising clinical instability in hospital patients before cardiac arrest or unplanned admission to intensive care. *Medical Journal of Australia.* 171 22-25.

Buist M and Stevens S (2013) Patient bedside observations: what could be simpler? BMJ Quality and Safety 22 (9) 699-701

Burnes B (2004) Managing Change: A Strategic Approach to Organisational Dynamics, 4th edn (Harlow:Prentice Hall).

Butler-Williams C., James J., Cox H., Hunt J (2010) The hidden contribution of the health care assistant: a survey-based exploration of support to their role in caring for the acutely ill patient in the general ward setting. *Journal of Nurse Management* 18 (7) 789-795

Carberry M., Clements P., Headley E (2014) How helpful are early warning scores? *Nursing Times* 110 1/3 12-14

Chaboyer W and Blake S (2008) Information sharing, knowledge transfer and patient safety. *Nursing in Critical Care,* 13: 121–123.

Chua WL., Mackey S., Ng EKC and Liaw SY (2013) Front line nurses' experiences with deteriorating ward patients: a qualitative study. *International nursing review,* 60(4) 501-509

Cohen L., Manion L., Morrison K (2008) *Research methods in education*. London: Routledge

Cook D (2010) Twelve tips for evaluating educational programs. *Med Teach* 32: 296-301

Cooper S., McConnell-Henry T., Cant R., Porter J., Missen K., Kinsman L., Endacott R., Scholes J (2011) Managing deteriorating patients: registered nurses' performance in a simulated setting. Open Nurs J. 5:120-6

Cummings TG and Worley CG (2009) Organisation Development and Change (9th Ed) Mason, OH: South-Western

Cuthbertson BH and Smith GB (2007) A warning on early-warning scores!. *British Journal of Anaesthesia* 98(6), 704-706

Day T and Oxton J (2014) The National Early Warning Score in practice: a reflection. *British Journal of Nursing* 23 (19) 1036-1040

De Meester K., Das T., Hellemans K (2013) Impact of a standardized nurse observation protocol including MEWS after Intensive Care Unit discharge *Resuscitation*, 84 84–188

Department of Health (2013) *National Early Warning Score, National Clinical Guideline No. 1*. Available at http://www.patientsafetyfirst.ie/index.php/ncec.html

Donohue L and Endacott R (2010) Track, trigger and teamwork: Communication of deterioration in acute medical and surgical wards. *Intensive and Critical Care Nursing* 26 (1) 10 - 17

Drennan D(1992) *Transforming Company Culture*. McGraw-Hill, London

Duignan P (2006) *Educational Leadership: Key Challenges and Ethical Tensions*. Cambridge University Press, Melbourne.

Endacott R., Kidd T., Chaboyer W., Edington J (2007) Recognition and communication of patient deterioration in a regional hospital: A multi-methods study. *Australian Critical Care* 20 (3) 100 – 105

Flood A., Kennedy K., Rafferty N., Doherty P (2008*) National Review of the Role of the Healthcare Assistant in Ireland*. Health Service Executive

Francis R (2013) *Robert Francis Inquiry Report into Mid-Staffordshire NHS Foundation Trust.* http://www.midstaffspublicinquiry.com/report accessed 26th March 2015

Frechtling JA (2007) *Logic modelling methods in program evaluation*. Jossey-Bass, San Francisco, CA.

Frye AW and Hemmer PA (2012) Program evaluation models and related theories: AMEE Guide No. 67. *Medical Teacher*, 34: e288–e299

Furlong E and Smith R (2005) Advanced nursing practice: policy, education and role development. *Journal of Clinical Nursing* 14(9), 1059-1066

Gao H., McDonnell A., Harrison DA., Moore T., Adam S., Daly K., Esmonde L., Harvey S (2007) Systematic review and evaluation of physiological track and trigger warning systems for identifying at-risk patients on the ward *Intensive Care Medicine* 33 (4) 667-67

Gearing P, Olney CM, Davis K, Lozano D, Smith LB & Friedman B (2006) Enhancing patient safety through electronic medical record documentation of vital signs. Journal of Health-care Information Management: JHIM20, 40–45

Glasper A (2013) Making caring a career: the role of the healthcare assistant. *British Journal of Nursing*. 22 (17) 1028-1029.

Goldhill DR (1999) Intensive and high-dependency care for the high-risk surgical patient Original Research Article *Best Practice & Research Clinical Anaesthesiology* 13 (3) 427-436

Goldhill DR and McNarry AF (2004) Physiological abnormalities in early warning scores are related to mortality in adult patients. *British Journal of Anaesthesia,* 92 (6) 882-884.

Gordon M., Darbyshire D., Baker P (2012). Non-technical skills training to enhance patient safety: a systematic review. *Medical Education* 46 (11), 1042e1054. http://dx.doi.org/10.1111/j.1365-2923.2012.04343.x.

Government of Ireland (2008) *Building a Culture of Patient Safety: Report of the Commission on Patient Safety and Quality Assurance*. Stationery Office, Dublin.

Graetz F., Rimmer M., Lawrence A.,Smith A (2006) Managing organisational change (2nd Australasian ed). Milton, Queensland, Australia: John Wiley and Sons.

Green AL and Williams A (2007) An evaluation of an early warning clinical marker referral tool. *Intensive and Critical Care Nursing,* 22 (5) 274 - 282.

Grimm JW (2010) Effective leadership: Making the difference. *Journal of Emergency Nursing* 36 (1) 74-77

Hands C., Reid E., Meredith P., Smith GB., Prytherch DR., Schmidt PE., Featherstone PI (2013) Patterns in the recording of vital signs and early warning scores: compliance with a clinical escalation protocol. *BMJ Quality & Safety* 22 (9) 719-726.

Health Information and Quality Authority (HIQA) (2011) *Report of the investigation into the quality and safety of services and supporting arrangements provided by the Health Service Executive at Mallow General Hospital.* Available at http://www.hiqa.ie/press-release/2011-04-19-mallow-reportidentifies-work-be-done-over-patient-safety

Health Service Executive (2008) *Improving Our Services. A Users' Guide to Managing Change in the Health Services Executive*. Dublin: HSE

Health Service Executive (2011) National Early Warning Score and associated COMPASS Education Programme. Dublin: HSE http://www.hse.ie/go/nationalearlywarningscore/

Health Service Executive (2013) *Facilitators Guide to Healthcare Assistants (HCAs) Measuring, Recording and Communicating Patients' Vital Signs, incorporating the National Early Warning Score (Adult) using the National Patient Observation Chart*. Dublin: HSE.

Health Service Executive North West (2014) *Nursing and Midwifery Metrics Evaluation Research Report.* Dublin: HSE

Higgins Y., Maries-Tillott C., Quinton S., Richmond J (2008) Promoting patient safety using an early warning scoring system. *Nursing Standard* 22 (44) 35–40

Higgs M and Rowland D (2011) What Does It Take to Implement Change Successfully? A Study of the Behaviors of Successful Change Leaders. *The Journal of Applied Behavioral Science* 47 (3) 309-335.

Hogan J (2006) Why don't nurses monitor the respiratory rates of patients? *British Journal of Nursing* 15 (1) 489–91

Huczynski A and Buchanan D (2001) Organisational Behaviour: An Introductory Text, 4th ed, Harlow: Prentice Hall

Irish Nurses Organisation (INO) (2006) G*uidelines on delegation to HCA.* Available at: http://www.inmo.ie/Home/Index/6203/5744

James J., Butler-Williams C., Hunt J., Cox H (2010) Vital signs for vital people: an exploratory study into the role of the Healthcare Assistant in recognising, recording and responding to the acutely ill patient in the general ward setting. *Journal of Nursing Management*. 18, 548–555

Jevon P (2011) Can adapted EWS improve response to deterioration? *Nursing times* 107 (3) 14-15.

Johnson M., Magnusson C., Allan H., Evans K., Ball E., Horton K., Curtis K., Westwood S (2014) Doing the writing' and 'working in parallel': How 'distal nursing' affects delegation and supervision in the emerging role of the newly qualified nurse. *Nurse Education Today 35* (2) e29-e33.

Joyce P (2008) Focus Groups. In Watson R, McKenna H, Cowman S and Keady J (Eds.) Nursing research, designs and methods. Churchill Livingstone, Philadelphia PP.289-297.

Kanter RM (1991) Change Motor Skills: what it takes to be creative, in Henry J and Walker D (eds) *Managing Innovation.* London:Sage

Karp T and Helgo T (2009) Reality revisited: leading people in chaotic change', *Journal of Management Development*. 28 (2) 81-93

Kellett J and Kim A (2012) Validation of an abbreviated VitalpacTM Early Warning Score (ViEWS) in 75,419 consecutive admissions to a Canadian Regional Hospital. *Resuscitation* 83(3) 297-302

Kessler I., Heron P., Dopson S., Magee H., Swain D., & Askham J (2010) The nature and consequences of support workers in a hospital setting. *Final report. NIHR Service Delivery and Organisation programme.*

Kirkpatrick D (1996) Revisiting Kirkpatrick's four-level model. Train Dev 1:54–59.

Kotter JP (1996) The eight-stage process. In *Leading Change* (Kotter JP ed.). Harvard Business School Press, Boston

Krueger R and Casey M (2009) *Focus Groups. A Guide for Applied Research*. Sage, Thousand Oaks.

Kyriacos U., Jelsma J. & Jordan S (2011) Monitoring vital signs using early warning scoring systems: a review of the literature. *Journal of nursing management*. 19 (3) 311-330.

Lees L (2011) Unqualified support staff are doing more observations with minimal training. Do standards exist for this work? *Nursing Times.*107 (7) 16.

Lewin K (1946) Action Research and minority problems. In G.W.Lewin (Ed.), *Resolving social conflict* (pp. 201-216). London, England: Harper and Row

Lewin K. (1951) Field Theory in Social Sciences. New York: Harper and Row

Ludikhuize J.,Smorenburg S., de Rooij S., de Jonge E (2012) Identification of deteriorating patients on general wards; measurement of vital parameters and potential effectiveness of the Modified Early Warning Score Original Research Article *Journal of Critical Care,* 27 (4) 424.e7424.e13

MacLeod H and Sharkey S (2013) *Ghost busting in healthcare essay series: self-organizing change.* Longwoods. Retrieved from: http://www.longwoods.com

Manley K., Sanders K., Cardiff S., Webster J (2011) Effective workplace culture: the attributes, enabling factors and consequences of a new concept. *International Practice Development Journal.* 1(2): 1-29 http://www.fons.org/library/journal.aspx Accessed on 3rd April 2015

Mansell I., Bennett G., Northway R et al. (2004) The learning curve: the advantages and disadvantages in the use of focus groups as a method of data collection. *Nurse Researcher* 11(4): 79-88

May T (2008) Social Research: Issues, Methods and Process. (3rd Ed). Open University Press. Berkshire.

McAuliffe E and Van Vaerenbergh C (2006) *Guiding change in the Irish health system*. Dublin: Health Service Executive.

McBride J., Knight D., Piper J., Smith GB (2005) Long-term effect of introducing an early warning score on respiratory rate charting on general wards. *Resuscitation.* 65 (1) 41-44.

McMillen R and Pitcher B (2010) Patient observations: a guide for support workers. *British Journal of Healthcare Assistants* 4 (9) 434-437.

McNamara G., Joyce P., O'Hara J (2010) Evaluation of Adult Education and Training Programs *International Encyclopedia of Education* Vol 3:548-554

McQuillan P et al (1998) Confidential enquiry into quality of care before admission to intensive care. *British Medical Journal*. 316: 7148, 1853-1858

Mohammed M., Hayton R., Clements G., Smith G. and Prytherch D (2009) Improving accuracy and efficiency of early warning scores in acute care. *British Journal of Nursing* 18 (1)

Morgan RJM., Williams F. & Wright MM (1997) An early warning scoring system for detecting developing critical illness*. Clinical Intensive Care* 8, 100

Morrison J (2003) ABC of learning and teaching in medicine. Evaluation. *BMJ* Vol 326: 385-387

National Confidential Enquiry into Patient Outcome and Death (2005) *An Acute Problem? A Report of the National Confidential Enquiry into Patient Outcome and Death (NCEPOD).* London: NCEPOD

National Confidential Enquiry into Patient Outcome and Death (2012) *Cardiac Arrest Procedures: Time to Intervene?* www.ncepod.org.uk/2012cap.htm

National Institute for Health and Clinical Excellence (2007) *Acutely ill patients in hospital. Recognition of and response to acute illness in adults in hospital*. NICE clinical guideline 50. London

National Patient Safety Agency (2007a) *Safer Care for the Acutely Ill Patient: Learning from Serious Incidents*. www.npsa.nhs.uk

National Patient Safety Agency (2007b) *Recognising and Responding Appropriately to Early Signs of Deterioration in Hospitalised Patients.* www.npsa.nhs.uk

Niegsch M., Fabritius M. L., & Anhøj J (2013) *Imperfect implementation of an early warning scoring system in a Danish teaching hospital: a cross-sectional study.* PloS one 8 (7) e70068

Nilsson A., Lindkvist M., Rasmussen BH., & Edvardsson D (2012) Staff attitudes towards older patients with cognitive impairment: need for improvements in acute care. *Journal of nursing management* 20 (5) 640-647

Nolan J., Deakin C., Soar J., Bottiger B. & Smith G (2005) *European Resuscitation Council guidelines for resuscitation 2005: section 4.Adult advanced life support.* 67 (1) 539-586.

Nursing and Midwifery Board of Ireland (2014) *Code of Professional Conduct and Ethics for Registered Nurses and Registered Midwives*. Blackrock, Co. Dublin www.nmbi.ie

O'Brien G (2002) Participation as a key to successful change – a public sector case study. Leadership and Organization Development Journal 23 (8), 442–455

Odell M., Victor C., Oliver D (2009) Nurses' role in detecting deterioration in ward patients: systematic literature review. Journal of Advanced Nursing 65 (10) 1992-2006.

Olson EE and Eoyang GH (2001) Facilitating organisational change: Lessons from complexity science. San Francisco, CA: Jossey-Boss/Pfeiffer

Patton MQ (2001) *Qualitative Evaluation and Research Methods* (2nd Edition). Thousand Oaks, CA: Sage Publications

Patterson M., Nolan M., Rick J., Brown J., Adams R., Musson G (2011) *From Metrics to Meaning: Culture Change and Quality of Acute Hospital Care for Older People. Executive Summary for the National Institute for Health Research Service Delivery and Organisation programme.*

Pettigrew AM (1985) The Awakening Giant: Continuity and Change in Imperial Chemical Industries. Basil Blackwell, Oxford.

Pettigrew AM (1990) Longitudinal field research on change: theory and practice. Organizational Science 3 (1), 267– 292

Pettigrew AM., Whipp R (1991) Managing Change for Competitive Success. Blackwell Publishers, Oxford

Preston R and Flynn D (2010) Observations in acute care: evidence-based approach to patient safety. *British Journal of Nursing* 19 (7) 442-447

Pritchard E., and Dewing J. (2000) A multi-method evaluation of an independent dementia care service and its approach, *Aging and Mental Health,* 5 (1) 63-72

Prochaska JO., Norcross JC., DiClemente CC (1994) Changing for good. New York: Morrow

Prytherch D., Smith GB., Schmidt PE., Featherstone PI (2010) ViEWS – towards a national Early Warning Score for detecting adult inpatient deterioration. *Resuscitation*; 81:932–7

Quirke S., Coombs M., McEldowney R (2011) Suboptimal care of the acutely unwell ward patient: a concept analysis. *Journal of Advanced Nursing*, 67: 1834–1845

Resuscitation Guidelines (2010) Resuscitation Council UK. www.resus.,org.uk

Rogers EM (1983) *Diffusion of Innovations*. Free Press, New York.

Rogers EM (1996) Diffusions of Innovations. (4th Ed.) The Free Press, New York

Rogers EM et al. (2005) Complex Adaptive Systems and the Diffusion of Innovations. *The Innovation Journal: The Public Sector Innovation Journal* 5: 10 pp.579-584.

Royal College of Nursing (2007) *Workplace Resources for practice development. London*: RCN.

Royal College of Physicians (2012) National Early Warning Score (NEWS): Standardising the assessment of acute-severe illness in the NHS. *Report of a working party.* Royal College of Physicians. London.

Senior B and Swailes S (2010) Organizational Change (4th Ed.). Prentice Hall, Harlow

Shanley C (2007) Management of change for nurses: lessons from the discipline of organizational studies *Journal of Nursing Management* 15 538-546

Slater P (2013) Health Service Executive North West Nursing & Midwifery Metrics Evaluation Research Report.

Smith AF and Oakley RJ (2006) Incidence and significance of errors in a patient 'track and trigger' system during an epidemic of Legionnaires' disease: retrospective case note analysis. *Anaesthesia* 61: 222–8

Smith G (2001) Alert – A Multi professional Course in Care of the Acutely Ill Patient. The Open Learning Centre, Faculty of the Environment, Portsmouth

Smith GB., Prytherch DR., Schmidt PE., Featherstone PI (2008) Review and performance evaluation of aggregate weighted 'track and trigger' systems. *Resuscitation;* 77 (2)170-179

Smith ME., Chiovaro JC., O'Neil M., Kansagara D., Quinones AR., Freeman M., Motu'apuaka ML. & Slatore CG (2014) Early warning system scores for clinical deterioration in hospitalized patients: a systematic review, *Annals of the American Thoracic Society* 11(9) 1454-1465.

Spath P (2013) *Introduction to healthcare quality management*.

Steen C (2010) Prevention of deterioration in acutely ill patients in hospital. *Nursing Standard* 24 (49) 49-58

Stufflebeam D. L and Shinkfield A. J (2007) *Evaluation Theory, Models, and Application*. San Francisco, CA: Wiley

Subbe CP., Kruger M., Rutherford P., Gemmel L (2001) Validation of a modified early warning score in medical admissions *QJM - Monthly Journal of the Association of Physicians*. 94 (10) 521-526.

Subbe CP (2010) Better ViEWs ahead? It is high time to improve patient safety by standardising Early Warning Scores. *Resuscitation*; 17 (6) 349-358.

Van Leuvan CH and Mitchell I (2008) Missed opportunities? An observational study of vital sign measurements. *Critical care and resuscitation:* Journal of the Australasian Academy of Critical Care Medicine 10 (2) 111-115

Watson D and Carberry M (2014) Training HCAs to recognise patient deterioration. Nursing Times Vol 110 Online issue http://www.nursingtimes.net/nursing-practice/specialisms/healthcare-assistants/training-hcas-to-recognise-patient-deterioration/5073685.article

Webb B (2002) Using focus groups as a research method: a personal experience. Journal of Nursing Management 10(1): 27-35

West P., Sculli G., Fore A., Okam N., Dunlap C., Neily J. & Mills, P (2012) Improving Patient Safety and Optimising Nursing TEamwork Using Crew REsource Management Techniques. *Journal of Nursing Administration* 42 (1) 15-20.

Wheatley I. (2006) The nursing practice of taking level 1 patient observation Intensive Critical Care Nurse 22 (2) 115–121

W.K. Kellogg Foundation (2004) *Logic model development guide* www.wkkf.org/knowledge-center/resources/2006/02/WK-Kellogg-Foundation-Logic-Model-Development-Guide.asp accessed on 30.05.2014

World Health Organization (1998) *Health Promotion Evaluation: Recommendations to Policymakers*: Report of the WHO European Working Group on Health Promotion Evaluation. Copenhagen: WHO Regional Office for Europe

World Health Organisation (2011) *WHO Patient Safety Curriculum Guide Multi-professional Edition.* World Health Organisation : Geneva

Yeung MS., Lapinsky SE., Granton JT., Doran DM., Cafazzo JA (2012) Examining nursing vital signs documentation workflow: barriers and opportunities in general internal medicine units *Journal of Clinical Nursing*, 21, 975–982 Blackwell Publishing Ltd

7. Appendices

Appendix 1: Summary of studies included in the literature review

Author/Year/Title	Sample size	Study Design/Method	Key Findings
1.Andrews and Waterman (2005) Packaging: A grounded theory of how to report physiological deterioration effectively.	30 Registered Nurses (RN), 7 Doctors 7 HCAs 1 Hospital 2 wards	Qualitative. Grounded theory. Interviews and observation. Explored how staff utilise information relating to EWS and vital signs to determine and react to deterioration.	Information needs to be communicated in a credible way to Doctors when relating deterioration concerns. Intuitive knowing and the late escalation of patient deterioration by nursing staff identified.
2. Wheatley (2006) The nursing practice of taking level 1 patient observations.	4 RN 4 unregistered staff 1 Hospital	Qualitative. Ethnographic study using participant observation and semi- structured interviews to determine the practice of recording baseline observations in general ward patients.	Experience of staff found to be important in detecting deterioration in a patient. Time limit/workload identified as barrier to detection and management of deteriorating patient. The practice of measuring vital signs observations has changed from being the role of the nurse to a role that is delegated to HCAs. A reliance on electronic monitoring equipment noted. Recording of the vital signs observations was frequently interrupted and incomplete.
3. Hogan (2006) Why don't nurses monitor the respiratory rates of patients?	Qualified Nurses Healthcare Assistants Student Nurses	Qualitative. Focus groups used to explore why recordings of patients baseline observations were incomplete	This study demonstrates that there are inadequacies in the recording of vital signs which ultimately impacts upon recognition of deterioration. Found that respiratory rate was not recorded in 50% of cases. May also suggest that nurses do not understand the value of physiological objective measures.
4. McBride *et al* . (2005)	Examine effects of introducing a new vital sign	Qualitative, before and after study examining effects of	Respiratory rate recording improved significantly following introduction of EWS.

Long-term effect of introducing an early warning score on respiratory rate charting on general wards	chart and EWS integrating respiration rate to six wards on a general hospital	introducing a new vital sign chart and EWS integrating respiration rate.	Education regarding same further improved result. The study confirms the long-term beneficial effect of introducing the MEWS system on respiratory rate recording into the general wards
5. Ludikhuize *et al.* (2012) Identification of deteriorating patients on general wards; measurement of vital parameters and potential effectiveness of the Modified Early Warning Score.	204 patients The aim of this study was to describe the current practice in measurement and documentation of vital signs and the possible usefulness of the Modified Early Warning Score (MEWS) to identify deteriorating patients on hospital wards.	A retrospective observational study of medical and surgical patients from 2007 with a severe adverse event including cardiopulmonary arrest, unplanned intensive care unit admission, emergency surgery, or unexpected death was performed.	In the 48 hours before the event, a total of 2688 measurements of one or more vital signs were taken. Overall, 81% of the patients had an MEWS value of 3 or more at least once during the 48 hours before their event. Recordings of vital signs were mostly incomplete. Even when the MEWS was 3 or more, respiratory rate, diuresis, and oxygen saturation were documented in only 30% to 66% of assessments.
6. Van Leuvan and Mitchell (2008) Missed opportunities? An observational study of vital sign measurements	1597 unique vital signs were recorded in 62 patients	A retrospective observational study of patient charts from two wards was conducted for a 48-hour period	Frequency of documentation was significantly lower for respiratory rate than for all other vital sign measurements Failure to perform vital sign measurements may underpin the failure to recognise patients in general wards whose condition is deteriorating.
7. James *et al*. (2010) Vital Signs for vital people: an exploratory study into the role of the	367 HCAs (131 respondents) 2 district general hospitals	Qualitative. A postal survey of HCAs to explore the role of the HCA as the recogniser, responder and recorder of acutely ill	HCAs play a key role within the ward team in the detection and monitoring of acutely ill patients. 71% of respondents have been involved in caring for critically ill patients within a one month

Healthcare Assistant in recognising, recording and responding to the acutely ill patient in the general ward setting		patients within the general ward setting.	period and 45% reported caring for acutely ill patients on a regular basis. Overuse of equipment, distraction with other patients and staffing levels need to be addressed in order to optimise care. Mandatory training, scenario based learning, ongoing education and clinical supervision is recommended to develop the HCA and to improve the quality of care for acutely ill patients.
8. Butler-Williams *et al*. (2010) The hidden contribution of the healthcare assistant: a survey-based exploration of support to their role in caring for the acutely ill patient in the general ward setting	131 HCAs 2 district general hospitals	Qualitative. A Questionnaire survey of HCAs to examine the feelings, support and feedback available to HCAs when caring for acutely ill ward patients.	HCAs play a significant role in the care of the acutely ill patient. Support mechanisms available to HCAs that take into account the feelings and stressors associated with caring for the acutely ill adult need to be further developed and evaluated.
9. Quirke *et al*. (2011) Suboptimal care of the acutely unwell ward patient: a concept analysis	Review of 40 articles published between 1990 and 2009	A concept analysis of the term 'suboptimal care' was carried out using Walker and Avant's (2005) approach to concept analysis	Patient complexity, healthcare workforce, organisation and education factors are factors identified as antecedents leading to Suboptimal care which can be attributed to delays in diagnosis, treatment or referral, poor assessment and inadequate or inappropriate patient management resulting in the patient being admitted to intensive care, suffering a cardiac arrest or death.
10. Endacott *et al*. (2007) Recognition and communication of patient deterioration in a regional hospital.	Case study design used to identify the cues that ward nurses and doctors use to identify patient deterioration.	A multi methods study. Reliance on vital signs identified as the route for initial identification of deterioration in a patient.	Inadequate communication and delayed referral identified by the authors. Level of consciousness absent on all patient records reviewed by the study. Staff unable to identify the parameters for concern from charts.
11. West *et al*. (2012) Improving patient	Certified Nursing Assistants	A crew resource management training programme used	Senior nurses protected nursing assistants from distractions when undertaking

safety and optimising nursing teamwork using crew resource management techniques	Senior Nurses	initially in aviation to improve flight safety was implemented by the Veterans Affairs National center for patient safety in select nursing units in USA to ensure nursing assistants had protected time to undertake vital signs to improve efficiency, morale and patient safety in the healthcare setting.	patient's vital signs which resulted in improvements in communication, efficiency and increased staff morale. Crew resource management techniques can be used to improve patient safety in healthcare settings.
12.Day and Oxton (2014) The National Early Warning Score in Practice: A reflection	Staff trained on 3 wards in use of NEWS in 3 hospital sites as part of a pilot study	Qualitative. A small pilot study prior to implementing NEWS in 3 hospital sites capturing the authors' experiences whilst implementing NEWS across one large inner London NHS Trust	NEWS was introduced to all adult areas between November 2013 and January 2014. All healthcare staff including healthcare assistants completed the RCP's online e-learning module and received scenario based teaching. Further plans to undertake a study to evaluate the effectiveness of NEWS, both as a tool and in relation to how successfully it has been implemented and used in practice.
13. Chua *et al*. (2013) Frontline nurses' experiences with deteriorating ward patients: a qualitative study	15 Enrolled Nurses (EN)	Qualitative using critical incident technique. 15 ENs who had encountered deteriorating ward patients were interviewed.	Three themes emerged describing the ENs experience with deteriorating patients recognising and responding to deterioration and taking responsibility. The study highlighted a need to enhance the ability of the EN through education focusing on increasing the awareness of the importance of performing complete vital signs monitoring and undertaking accurate interpretation of vital signs.
14. Johnson *et al*. (2014) 'Doing the writing' and 'working in parallel': How 'distal	33 Newly qualified nurses 10 HCAs 12 Ward managers	Ethnographic case studies undertaken in 3 hospital sites in UK utilizing a mixed methods approach of	The demand on newly qualified nurse's time and pressures to maintain records can influence how effectively nurses delegate to and

nursing' affects delegation and supervision in the emerging role of the newly qualified nurse.		patient observations and interviews	supervise HCAs. Ward culture and individual working styles can either promote team working or lead to working 'in parallel' resulting in less efficient collaboration between the Nurse and the HCA
15. Odell *et al*. (2009) Nurses' role in detecting deterioration in ward patients: systematic literature review.	Review of 14 studies published between 1990 and 2007 describing nursing observations on deteriorating adult patients in general hospital wards.	Meta-analysis systematic literature review. Identification of qualitative and quantitative studies and included the use of EWS tools.	Suboptimal care described as failing to respond to, report and recognise patient deterioration is supported in the literature. Factors include staffing levels, level of knowledge, experience of ward nurses, educational opportunities and communication. Taking vital signs is often delegated to HCAs. Through intuitive knowing and knowing the patient are identified as important in detecting and recognising deterioration.
16. Kyriacos *et al*. (2011) Monitoring vital signs using early warning scoring systems: a review of the literature	A review of 534 papers between 1998 and 2011 reviewing and evaluating the need for and the development and utility of MEWS/EWS systems for adult inpatients outside critical care and emergency departments	Literature review of published papers. Of 534 papers, 14 data papers, two reviews and two meta-analyses contained data on the need for and the validity, reliability, and utility of MEWS/EWS systems	Early warning systems are deemed necessary to facilitate recognition of abnormal vital signs in deteriorating patients however they have limitations. Better monitoring implies better care, but there is a paucity of data on the validation, implementation, evaluation and clinical testing of vital signs' monitoring systems in general wards. Patient safety continues to depend on nurses' clinical judgment of deterioration.
17. Smith *et al*.(2008) Review and performance evaluation of aggregate weighted 'track and trigger'	A total of 33 unique AWTTS were identified	A systematic review of the literature was performed to describe the AWTTS their components and their differences	There is a wide range of unique, but very similar AWTTS in clinical use. There is no consistency regarding their psychological components

systems (AWTTS)			
18. Niegsch *et al*. (2013) Imperfect Implementation of an Early Warning Scoring System in a Danish Teaching Hospital: A Cross-Sectional Study	132 patients Study of ward observational charts	7 day prospective observational randomized cross sectional point prevalence study	Progress was made in observation of patients vital signs Implementation of the EWS not fully successfully completed. Redesign of the training programme to educate staff in recognising and caring for critically ill adults
19. Hands *et al*. (2013) Patterns in the recording of vital signs and early warning scores: compliance with a clinical escalation protocol	950 043 vital sign datasets were recorded. The pattern of vital signs and VitalPAC Early Warning Score (ViEWS) data collected from admissions to all adult inpatient areas in an NHS district general hospital	Quantitative Data collected using an electronic system (VitalPAC)	There was only partial adherence to the vital signs monitoring protocol. Sicker patients appear more likely to have vital signs measured overnight, but even their observations were often not followed by timely repeat assessments. The observed pattern of monitoring may reflect the impact of competing clinical priorities.

Appendix 2: Ethics Approval

Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive

LETTERKENNY GENERAL
HOSPITAL

General Manager's Office, Letterkenny General Hospital, Letterkenny, Co. Donegal

Telephone:(074) 9123501 *Fax: (074) 9104651*

14th October 2014

Ms. Roisin McLoughlin
Specialist Co-Ordinator
Centre for Nursing & Midwifery Education
Letterkenny

Re: Implementing the Healthcare Assistant National Early Warning Score (HCA-NEWS) Programme in the medical division of Letterkenny General Hospital

Dear Ms. McLoughlin,

With reference to application listed above, your application has been considered by members of LGH Ethics Committee and I am happy on behalf of Letterkenny General Hospital Ethics Committee to grant Chairman's approval.

Kind Regards.

Yours sincerely

Mr. Seán Murphy
General Manager &
Chairperson of Ethics Committee

Appendix 3: Prerequisite Audit for HCAs to attend Training

Health Care Assistant National Early Warning Scores HCA-NEWS Project Application		
Personal Details		
Forename		
Surname		
Personnel Number		
Current Clinical Area		
Contact Details	Mobile Phone Number: Landline Number:	
Nominated by Director of Nursing		
Educational Qualification		
Successfully completed full FETAC Level 5 Healthcare Support or Health Service Skills award	Yes □	No □
	If Yes, insert Date completed ___/____/_____	
Successfully completed the FETAC Level 5 Activities of Living Patient Care Module component	Yes □	No □
	If Yes, insert Date completed ___/____/_____	
Completed Heartsaver AED programme within the previous two years	Yes □	No □
	If Yes, insert Date completed ___/____/_____	

Appendix 4: Letter of Invitation to HCAs

Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive

Centre for Nursing and Midwifery Education, Donegal
Letterkenny/St. Conal's Hospitals
Letterkenny
Co. Donegal
Tel: 074 9188865
Fax: 074 9129442
roisin.mcloughlin@hse.ie

13/11/2014

Dear,

Re: Implementation of Healthcare Assistant National Early Warning Scores programme (HCA-NEWS)

I would be grateful if you could complete the enclosed questionnaires which will allow you to provide your views in relation to your role as a Healthcare Assistant and the environment you work in. The questionnaire addresses three elements; culture, leadership and evaluation. Your contribution is crucial to the future development of the role of the healthcare assistant within the clinical setting.

I am undertaking an MSc in Leadership in Health Professions Education, at the RCSI Institute of Leadership. In part fulfillment of the MSc I am required to undertake a change project. For this project I am implementing the HCA NEWS programme in the Medical Department. The NEWS is a bedside track and trigger scoring system used by staff to calculate a total EWS from routine observations. It aims to indicate early signs of deterioration in patients' conditions and prompts more timely medical review and treatment of patients.

A 2 ½ hour education programme will be provided on the 26th or 28th November 2014 in the Centre for Nursing & Midwifery Education. Your line manager will advise you on which date to attend. You will be trained to identify safe and effective practice and communicate the EWS to the Registered Nurse in accordance with local policy. You will be assigned a nurse mentor who will supervise and support you to complete a six week period of supervised practice and skills demonstration to achieve competence in recording, calculating and reporting the patients total EWS. I will be exploring your perceptions of the HCA-NEWS programme pre and post training and will evaluate the impact of the project through capturing your experience through a focus group. An audit of

Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive

Centre for Nursing and Midwifery Education, Donegal
Letterkenny/St. Conal's Hospitals
Letterkenny
Co. Donegal
Tel: 074 9188865
Fax: 074 9129442
roisin.mcloughlin@hse.ie

documentation by practice development team using the metrics tool will be undertaken.

You have been nominated by Dr Anne Flood, Director of Nursing to attend this training as you have successfully attained a FETAC level 5 Health Service Skills Certificate or equivalent. You have also successfully completed the FETAC Activities of Living Patient Care Module and you have undertaken the Heartsaver AED within the last two years.

Could you please return your completed questionnaire on or before Monday 24th November 2014 to:

Roisin McLoughlin
Specialist Coordinator
Centre for Nursing and Midwifery Education (Donegal)
Letterkenny/St Conal's Hospital
Letterkenny
Co Donegal

Thanking you in anticipation of your support for this project. Your contribution will remain anonymous and you will not be identified in any way in subsequent research reports. If you have any queries or concerns regarding the questionnaire please contact me on 087 1301323 or Tel: 074 9188865.

Yours Sincerely,

Roisin McLoughlin

Roisin McLoughlin
Specialist Co-ordinator
Centre for Nursing and Midwifery Education

Appendix 5: Information Sheet to Participants

Information Sheet

Royal College of Surgeons in Ireland

Investigator: Roisin McLoughlin

Study Name: The implementation of the Healthcare Assistant - National early Warning Score (HCA-NEWS) in the medical division of an Acute Hospital

PARTICIPANT INFORMATION LEAFLET

This document will tell you about the purpose, risks and benefits of this study. Please read it carefully. If there is anything you are not clear about, the researcher will be happy to explain it to you. Please take as much time as you need to read it. If you agree to take part, you will be asked to sign the consent document. You should only consent when you feel that you understand what is being asked of you, and you have had enough time to think about your decisic

WHAT IS THE PURPOSE OF THIS STUDY?

The aim of this study is to explore your experience of training in and implementing the HCA-NEWS programme in a medical ward in an acute hospital The HCA NEWS programme focuses on the HCA competently measuring & recording a patient's vital signs including calculating and recording a total EWS using the Adult Patient Observation Chart, and communicating the findings to the registered nurse (RN) in accordance with local policy.

The NEWS is a bedside track and trigger scoring system used by staff to calculate a total EWS from routine observations. It aims to indicate early signs of deterioration in patients' conditions and prompts more timely medical review and treatment of patients

WHY HAVE I BEEN CHOSEN?

You were chosen as you have successfully attained a FETAC level 5 Health Service Skills Certificate or equivalent. You have also successfully completed the FETAC Activities of Living Patient Care Module and you have undertaken the Heartsaver AED within the last two years.

WHO IS ORGANISING THE STUDY?

Ms. Roisin McLoughlin is a Specialist Coordinator in the, Centre for Nursing & Midwifery Education, Donegal, and is undertaking this study as part fulfillment of a Master's in Leadership in Health Professions Education at the Institute of Leadership, RCSI.

WHAT WILL HAPPEN IF I VOLUNTEER?

Your participation is entirely voluntary. If you initially decide to take part you can subsequently change your mind without difficulty. If you agree to participate, a National education session will be provided at local level which will facilitate you to develop and update knowledge in undertaking clinical

observations incorporating the EWS. On completion of the education session you will continue to undertake clinical observations. In addition you will be supervised and supported by a Registered Nurse (RN) to complete a period of supervised practice and skills demonstration to achieve competence in recording and calculating the patients total EWS and communicating the findings back to the RN who delegated the task.
A one-off focus group meeting will be arranged with you and other HCAs.The discussion will centre on your experience, your views and ideas on the development of your role in this initiative and the contribution of your role to patient care. To ensure that we interpret accurate information from the focus group, the meeting will be recorded using a tape-recorder and will be transcribed word for word afterwards. You will be given the opportunity to review, edit or erase any audio recording or transcript of a recording to which you have contributed.

ARE THERE ANY BENEFITS FROM MY PARTICPATION?

The results of this focus group will in themselves provide useful information regarding the potential of your role as a Healthcare Assistant to further support and enhance safe effective care.

ARE THERE ANY RISKS INVOLVED IN PARTICIPATING?

There are no known risks anticipated for this project.

WILL THE INFORMATION OBTAINED IN THE STUDY BE CONFIDENTIAL?

All information collected in this study will be confidential and will be used only for the purposes of the study. No names will be mentioned in any reports or publications that arise from this study. Care will be taken that individuals cannot be recognised from details in reports or publications.

WILL I BE PAID FOR TAKING PART IN THIS STUDY?

No.

WILL MY EXPENSES BE COVERED FOR TAKING PART IN THIS STUDY?

No

IS THIS STUDY SAFE AND BENEFICIAL?

The Letterkenny General Hospital Research Ethics Committee has reviewed the application and chairperson's approval has been granted for this study.

CONTACT DETAILS

Ms. Roisin McLoughlin Tel.: 074 91 88865 email: roisin.mcloughlin@hse.ie
Supervisor: Dr Pauline Joyce, Institute of Leadership, RCSI, Reservoir House, Sandyford, Dublin 18. Tel. 01 402 8654, email: paulinejoyce@rcsi.i.

Appendix 6: Consent Form for Participants

Consent Form
Royal College of Surgeons in Ireland
Principal Investigator: Roisin McLoughlin, Specialist Coordinator, Centre for Nursing & Midwifery Education. Tel. 074 91 88865, email roisin.mcloughlin@hse.ie
Supervisor : Dr Pauline Joyce, Institute of Leadership, RCSI, Reservoir House, Sandyford, Dublin 18Tel: Tel. 01 402 8654, email: pjoyce@rcsi.ie
Study Name: HCA NEWS

Please tick the appropriate answer		
I have read and understood the Information Leaflet about this research project. The information has been fully explained to me and I have been able to ask questions, all of which have been answered to my satisfaction.	Yes ☐	No ☐
I understand that I don't have to take part in this study and that I can opt out at any time. I understand that I don't have to give a reason for opting out and I understand that opting out will not affect my future studies	Yes ☐	No ☐
I understand that my identity will remain confidential at all times.	Yes ☐	No ☐
I have been given a copy of the Information Sheet and Consent form for my records	Yes ☐	No ☐

Participant Name (Block Capitals) _____

Signature_____ **Date**_____

To be completed by the Principal Investigator or her nominee
I, the undersigned, have taken the time to fully explain the nature and purpose of this study to the above participant, in a manner that he/she can understand. I have explained the risks and possible benefits involved and have invited him/her to ask questions on any aspect of the study that concerned them.

Name (Block Capitals)

Signature_____ **Date** _____

Appendix 7: Pre HCA NEWS Training Questionnaire

Pre HCA NEWS Training Questionnaire

Please answer the following questions as they apply to you and your area of employment. Where indicated please tick the appropriate box

1. What medical ward do you work in _____

2. Who do you report to (tick all that apply)

Student Nurse		Assistant Director of Nursing	
Staff Nurse		Doctor	
Clinical Nurse Manager		Allied Health Professional	

3. How many years have you been employed in your role as Healthcare Assistant

0 - 5		16 - 20	
6 -10		20 - 25	
11- 15		25 - 30	

4. How many Healthcare Assistants are on your team _____
5. How many Registered Nurses are on your team _____
6. How many hours do you work a week _____

	Strongly Agree	Agree	Disagree	Strongly Disagree
7. I feel part of the nursing team in my clinical setting				

8. How are patient care issues communicated to you (tick all that apply)

Patient Report		Written	
One to One from a Registered Nurse		Doctor	
From other Healthcare Assistants		Other	

9. Are you currently delegated the task of measuring and recording a patient's vital signs

Yes		No	

10. Who delegates this task to you _____

11. Are there patients currently that you are not permitted to take observations on (tick all that apply)

Baseline observations on a new patient admission	
Patient in the first 48 hours transfer from critical care units e.g. CCU / ICU / HDU	
Patients undergoing blood or blood product transfusion	
Pregnant women	

12. Who are you accountable to _____

13. Who is responsible for your practice _____

14. What concerns do you have regarding delegation of duties to you (tick all that apply)

Responsibility		Patients acceptance	
Patient safety		Training & competence	
Expanded role of the HCA		Supervision	
Communicating/reporting to delegator		Other _____	

Team Culture Tool

Think about the culture of YOUR TEAM. Your team could be the staff you work with on a ward.

Read through the list (a. to l.) below and circle the number on each question that identifies the nearest to where you think YOUR TEAM is.

EXAMPLE

People in my team break rank and go it alone	1	2	3	4	5	People in my team pull together

If I circle 1 then I feel my team work on their own most of the time. If I circle 3 I think they work some of the time alone and some time pulling together as a team. If I circle 5 I feel that on the whole my team work together.

People in my team have dissimilar values, interests and beliefs	1	2	3	4	5	People in my team share values, interests and beliefs
People in my team break rank and go it alone	1	2	3	4	5	People in my team pull together
Individuals in my team operate alone and there is conflict between them	1	2	3	4	5	There is community spirit and co-operation in my team
My team is ruled by standards of the past	1	2	3	4	5	My team is ruled by visions of the future
In my team there are winners and losers, them and us	1	2	3	4	5	People confront and move beyond their differences in my team
My team is anti-change	1	2	3	4	5	My team is change oriented
There is weak co-ordination in my team	1	2	3	4	5	There is strong co-ordination in my team
My team is inward looking and is focused on itself	1	2	3	4	5	My team is outward looking and does not focus on itself
My team is dominated by routine and systems	1	2	3	4	5	My team is creative and ideas dominated
People do not reflect about their work in my team	1	2	3	4	5	People reflect about their work in my team
There is disagreement in my team	1	2	3	4	5	There is harmony in my team

(Developed from Dowling J & Pritchard E (1999)

Thank you for completing this questionnaire. (4)

Appendix 8: Post HCA NEWS Training Questionnaire

Post HCA NEWS Training Questionnaire

Please answer the following questions as they apply to you and your area of employment. Where indicated please tick the appropriate box

1. What medical ward do you work in _____

2. Please tick your age group: 18-24 years old | 25-34 years old | 35-44 years old | 45-54 years old | 55-64 years old | 65 and older |

3. Who do you report to (tick all that apply)

Student Nurse		Assistant Director of Nursing	
Staff Nurse		Doctor	
Clinical Nurse Manager		Allied Health Professional	

	Strongly Agree	Agree	Disagree	Strongly Disagree
4. I feel part of the nursing team in my clinical setting				

5. How are patient care issues communicated to you (tick all that apply)

Patient Report		Written	
One to One from a Registered Nurse		Doctor	
From other Healthcare Assistants		Other	

6. Are you currently delegated the task of measuring and recording a patient's vital signs incorporating the Early warning score

Yes		No	

7. Who delegates this task to you _____

8. Are there patients currently that you are not permitted to take a total EWS on (tick all that apply)

Baseline observations on a new patient admission	
Patient in the first 48 hours transfer from critical care units e.g. CCU/ICU/HDU	
Patients undergoing blood or blood product transfusion	
Pregnant women	
Other _____	

9. Who are you accountable to _____

10. Who is responsible for your practice _____

11. What concerns do you have regarding delegation of duties to you (tick all that apply)

Responsibility		Patients acceptance	
Patient safety		Training & competence	
Expanded role of the HCA		Supervision	
Communicating/reporting to delegator		Other _____	

12. Energy for Change

Following attending the education and training programme and subsequent supervision and competency assessment by a registered nurse mentor of you measuring, recording, calculating and communicating a total EWS using the National Patient Observation chart how *confident* are you that you will be able to apply what you have learned in practice?(Circle one rating)

0……1……2……3……4……5……6……7……8……9……10

Not at all confident Extremely confident

If you circled 6 or lower, please answer the following question. Circle all that apply.

My confidence is not high because:

a. I do not have the necessary knowledge and skills
b. I do not have a clear picture of what is expected of me
c. I have other higher priorities
d. I do not have the necessary resources to do it
e. I do not have the human support to do it
f. Other (please explain):

13. How *committed* are you to applying what you learned to your work? (Circle one rating)

0……1……2……3……4……5……6……7……8……9……10

Not at all committed Extremely committed

If you circled 6 or lower, please answer the following question. Circle all that apply.

My commitment isn't high because:

a. I do not have the necessary knowledge and skills
b. I do not have a clear picture of what is expected of me
c. I have other higher priorities
d. I do not have the necessary resources to do it
e. I do not have the human support to do it
f. I am not required to do this
g. I am not rewarded or recognized for doing this
h. Other (please explain):

Team Culture Tool

Think about the culture of YOUR TEAM. Your team could be the staff you work with on a ward.

Read through the list (a. to l.) below and circle the number on each question that identifies the nearest to where you think YOUR TEAM is.

EXAMPLE

People in my team break rank and go it alone	1	2	3	4	5	People in my team pull together

If I circle 1 then I feel my team work on their own most of the time. If I circle 3 I think they work some of the time alone and some time pulling together as a team. If I circle 5 I feel that on the whole my team work together.

People in my team have dissimilar values, interests and beliefs	1	2	3	4	5	People in my team share values, interests and beliefs
People in my team break rank and go it alone	1	2	3	4	5	People in my team pull together
Individuals in my team operate alone and there is conflict between them	1	2	3	4	5	There is community spirit and co-operation in my team
My team is ruled by standards of the past	1	2	3	4	5	My team is ruled by visions of the future
In my team there are winners and losers, them and us	1	2	3	4	5	People confront and move beyond their differences in my team
My team is anti-change	1	2	3	4	5	My team is change oriented
There is weak co-ordination in my team	1	2	3	4	5	There is strong co-ordination in my team
My team is inward looking and is focused on itself	1	2	3	4	5	My team is outward looking and does not focus on itself
My team is dominated by routine and systems	1	2	3	4	5	My team is creative and ideas dominated
People do not reflect about their work in my team	1	2	3	4	5	People reflect about their work in my team
There is disagreement in my team	1	2	3	4	5	There is harmony in my team

(Developed from Dowling J & Pritchard E (1999)

Thank you for completing this questionnaire. (4)

Appendix 9: Focus Group Questions

Focus Group Questions

Registered Nurse Mentors /CNMS

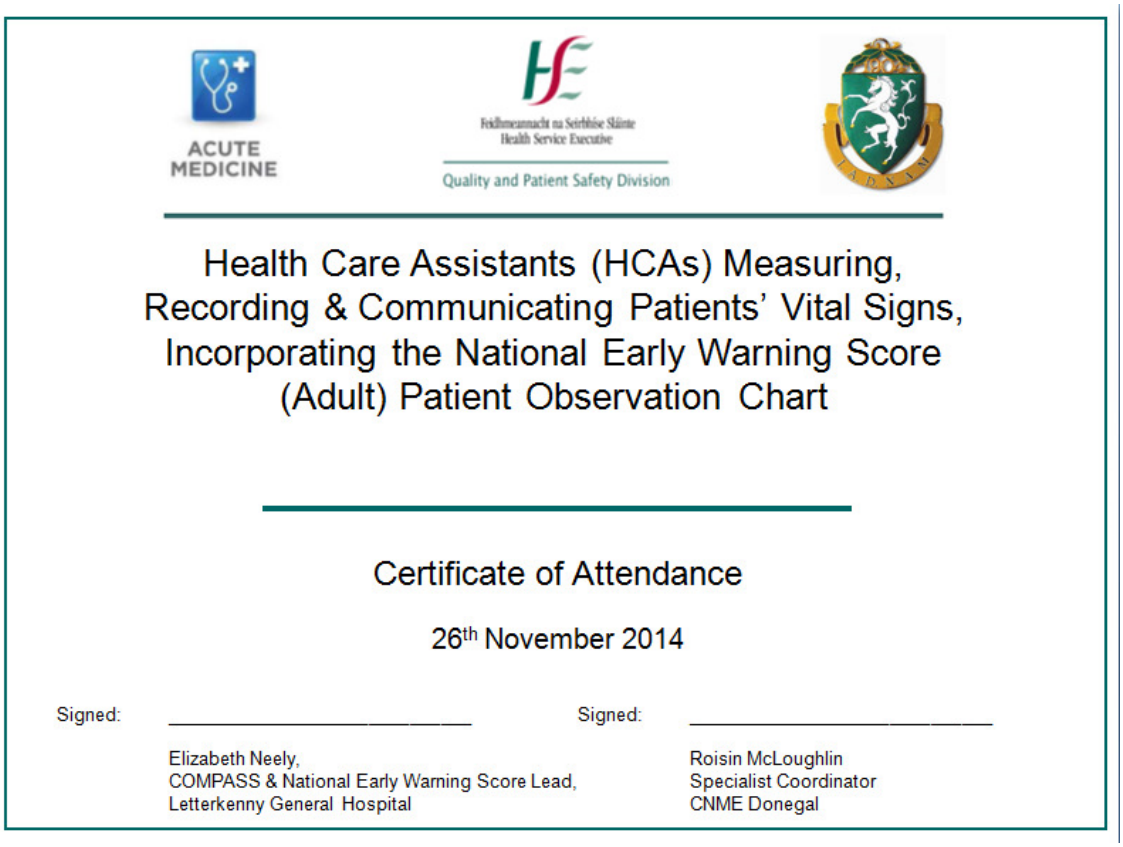
1. Can you discuss your experiences as a registered nurse mentor /CNM in supervising and assessing the HCA as competent in NEWS
2. How satisfied are you in delegating NEWS to the HCA
3. In your opinion what are the benefits on the development of the HCAs role and their contribution to patient care
4. What are the benefits for you? For staff? For patients
5. As Nurses involved in implementing this change at ward level. What will the impact of the change be for you?
6. What challenges have you encountered or perceive that you may encounter in implementing this initiative on the wards
7. Can you identify risks or issues that may be associated with this initiative

Focus Group Questions

Healthcare Assistants

1. Can you discuss your experiences in undertaking the HCA-NEWS on the ward
2. Is the NEWS being delegated to you the HCA? Who Delegates this task to you?
3. In your opinion what are the benefits to developing the HCAs role and your contribution to patient care?
4. As Healthcare Assistants involved in applying this change at ward level what will the impact of the change be for you?
5. What challenges/difficulties or barriers have you encountered that might prevent you from applying what you have learned?
6. What might help to overcome those barriers?
7. Can you identify risks or issues that may be associated with this initiative

Appendix 10: Certificate of Attendance



ACUTE MEDICINE

Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive
Quality and Patient Safety Division

Health Care Assistants (HCAs) Measuring, Recording & Communicating Patients' Vital Signs, Incorporating the National Early Warning Score (Adult) Patient Observation Chart

Certificate of Attendance

26th November 2014

Signed: _____ Signed: _____

Elizabeth Neely,
COMPASS & National Early Warning Score Lead,
Letterkenny General Hospital

Roisin McLoughlin
Specialist Coordinator
CNME Donegal

Appendix 11: HCA-NEWS ISBAR Record of Documentation and Communication

Health Care Assistant Report of Early Warning Score (EWS)			
EWS Score:		**Date**__/___/_____	**Time**_____
Trigger (please tick)			
Respiratory rate:		**Verbally Reported to:**	
O_2 saturations:		**Grade**_____	**Signature**_____
Oxygen therapy:		**Nurse PIN**_____	
Inspired O_2:			
Heart rate:		**Reported By:**	
Systolic BP:		**Grade**_____	**Signature**_____
Conscious level		**Registration No.:**_____	
Temperature:			

Appendix 12: Skills Demonstration and Competence Assessment Record

Health Care Assistant Measuring, Recording and Communicating Patients' Vital Signs
Incorporating the Early Warning Score at Letterkenny General Hospital

Skills Demonstration and Competence Assessment Record

Healthcare Assistants' Measuring, Recording and Communicating Patients' Vital Signs, incorporating the National Early Warning Score (Adult), using the Patient Observation Chart at Letterkenny General Hospital
Skill Demonstration and Competence Assessment Record Template

Name _____ **Work Location** (full details) _____
Date of Attendance at Additional Education Session _____

This is to certify that _____ has successfully measured, recorded and communicated a patient's SaO_2 under my supervision, in accordance with the guideline for the delegation & recording of the early warning score system by HCA in adult patients at Letterkenny General Hospital

Signature _____ **Print Name** _____ **Date** _____

Position _____ **Nursing and Midwifery Board of Ireland (NMBI) PIN** _____

This is to certify that _____ has successfully measured, recorded and communicated a patient's oxygen delivery status (F_1O_2) under my supervision, in accordance with the guideline for the delegation & recording of the early warning score system by HCA in adult patients at Letterkenny General Hospital

Signature _____ **Print Name** _____ **Date** _____

Position _____ **NMBI PIN** _____

This is to certify that _____ has successfully measured, recorded and communicated a patient's Level of Consciousness under my supervision, in accordance with the guideline for the delegation & recording of the early warning score system by HCA in adult patients at Letterkenny General Hospital

Signature _____ **Print Name** _____ **Date** _____

Position _____ **NMBI PIN** _____

Healthcare Assistants' Measuring, Recording and Communicating Patients' Vital Signs, incorporating the National Early Warning Score (Adult), using the Patient Observation Chart at Letterkenny General Hospital
SKILLS DEMONSTRATION PROCESS

Healthcare Assistants' (HCAs) will be observed and assessed in measuring, recording and communicating patients' SaO_2, Inspired Oxygen status (F_1O_2) and Level of Consciousness.

HCAs will be required to demonstrate the following skills:

- Organisation and preparation of the tasks, paying particular attention to meeting the needs of patients;
- Ability to competently carry out each task safely and effectively;
- Communication with the patient and any other appropriate person throughout the tasks
- Use of appropriate safety and health practices;
- Accurate recording of vital signs;
- Accurate calculation of Early Warning Score;
- Accurate reporting of Early Warning Score.

The assessor will:

- Be a Registered Nurse actively registered with the Nursing and Midwifery Bord of Ireland (NMBI);
- Date and sign each assessment (a minimum of 15) undertaken by the Healthcare Assistant

The Healthcare Assistant is responsible for ensuring that this skills demonstration and competence record is completed and maintained safely.

SKILLS DEMONSTRATION AND COMPETENCE ASSESSMENT RECORD - Peripheral Oxygen Saturation (SaO_2)

Healthcare Assistants Name:_____

The Registered Nurse must indicate (√) achieved or (x) not achieved for each identified criteria

Criteria	√/x			√/x			√/x			√/x			√/x		
1. Demonstrates knowledge of the guideline for the delegation & recording of the early warning score system by HCA in adult patients at Letterkenny General Hospital															
2. Identifies and prepares appropriate equipment for measuring SaO_2															
3. Demonstrates knowledge and understanding of equipment used to measure SaO_2															
4. Explains the procedure and rationale to the patient and obtains informed consent verbally															
5. Demonstrates the ability to manage fears/anxieties the patient may have in relation to this procedure															
6. Demonstrates correct infection prevention & control procedures including hand washing															
7. Attaches the sensor to the appropriate area e.g. finger or ear															
8. Observes waveform fluctuations to ensure waveform is registering															
9. Observes and records the measured SaO_2 on the NEWS Adult Patient Observation Chart															
10. Allocates the appropriate score															
11. Follows the escalation protocol flowchart on the national adult observation chart alerting the Registered Nurse of early warning score(EWS) as applicable															
12. EWS is reported to the Registered Nurse using the ISBAR communication tool															
Registered Nurse's Name _____ **Registered Nurse's Signature** _____ **RGN's Initials** **NMBI Pin Number** _____ **Date**															

SKILLS DEMONSTRATION AND COMPETENCE ASSESSMENT RECORD - Inspired Oxygen Status (F_1O_2)

Healthcare Assistants Name:_____

The Registered Nurse must indicate (√) achieved or (x) not achieved for each identified criteria

Criteria	√/x			√/x			√/x			√/x			√/x		
1. Demonstrates knowledge of the guideline for the delegation & recording of the early warning score system by HCA in adult patients at Letterkenny General Hospital															
2. Demonstrates knowledge of equipment used to deliver oxygen															
3. Observes for the presence of oxygen nasal cannula or oxygen facemask															
4. Allocates a score of 0 on the NEWS Adult Patient Observation Chart if no oxygen therapy in progress															
5. Allocates a score of 3 on the NEWS Adult Patient Observation Chart if oxygen therapy in progress															
6. Notifies the Registered Nurse immediately if equipment not properly placed															
7. Follows the escalation protocol flowchart on the national adult observation chart alerting the Registered Nurse of early warning score(EWS)															
8. EWS is reported to the Registered Nurse using the ISBAR communication tool															
Registered Nurse's Name _____ **Registered Nurse's Signature** _____ **RGN's Initials** **NMBI Pin Number** _____ **Date**															

SKILLS DEMONSTRATION AND COMPETENCE ASSESSMENT RECORD Level of Consciousness (AVPU)

Healthcare Assistants Name:_____

The Registered Nurse must indicate (√) achieved or (x) not achieved for each identified criteria

Criteria	√/x			√/x			√/x			√/x			√/x		
1. Demonstrates knowledge of the guideline for the delegation & recording of the early warning score system by HCA in adult patients at Letterkenny General Hospital															
2. Demonstrates knowledge of the AVPU score used to measure a patient's level of consciousness (LOC)															
3. Demonstrates the ability to manage fears/anxieties the patient may have															
4. Allocates a score of 0 for all patients who are **Alert**															
5. Allocates a score of 0 for patient who is asleep but responds to **Voice**															
6. Allocates a score of 3 and Alerts the Registered Nurse immediately if patient only responding to **Voice**															
7. Allocates a score of 3 and Alerts the Registered Nurse immediately if patient only responding to **Pain**															
8. Allocates a score of 3 and Alerts the Registered Nurse immediately if patient is **Unresponsive**															
9. Follows the escalation protocol flowchart on the national adult observation chart alerting the Registered Nurse of early warning score(EWS)															
Registered Nurse's Name _____ **Registered Nurse's Signature** _____ **RGN's Initials** **NMBI Pin Number** _____ **Date**															

SKILLS DEMONSTRATION AND COMPETENCE ASSESSMENT RECORD - Total Early Warning Score (EWS)

Healthcare Assistants Name:_____

The Registered Nurse must indicate (√) achieved or (x) not achieved for each identified criteria

Criteria	√/x			√/x			√/x			√/x			√/x		
1. Demonstrates knowledge of the guideline for the delegation & recording of the early warning score system by HCA in adult patients at Letterkenny General Hospital															
2. Identifies and prepares appropriate equipment															
3. Demonstrates knowledge and understanding of equipment used															
4. Explains the procedure and rationale to the patient and obtains informed consent verbally															
5. Demonstrates the ability to manage fears/anxieties the patient may have in relation to this procedure															
6. Demonstrates correct infection prevention & control procedures including hand washing															
7. Accurately measures, records and scores **Temperature** on the NEWS Adult Patient Observation Chart															
8. Accurately measures, records and scores **Pulse (Heart rate)** on the NEWS chart															
9. Accurately measures, records and scores **Respiratory rate** on the NEWS chart															
10. Accurately measures, records and scores **Blood Pressure** on the NEWS chart															
11. Accurately measures, records and scores **Inspired Oxygen Therapy** on the NEWS chart															
12. Accurately measures, records and scores **Peripheral Oxygen Saturation** on the NEWS chart															
13. Demonstrates knowledge of **Conscious Level (AVPU)** and records accurately															
14. Calculates a total early warning score (EWS) and records correctly															
15. Follows the escalation protocol flowchart on the national adult observation chart alerting the Registered Nurse of EWS															
16. EWS is reported to the Registered Nurse using the ISBAR communication tool															
Registered Nurse's Name _____ **Registered Nurse's Signature** _____ **RGN's Initials** **NMBI Pin Number** _____ **Date**															

COMMENTS SHEET

Healthcare Assistants Name:_____

Date	Comments (Comments pertaining to the skills demonstration process may be recorded by the Registered Nurse in relation to measuring, recording and communicating patients' vital signs using the NEWS Adult Patient Observation Chart).	Signature

Appendix 13: HCA Early Warning Score Independent Self Audit

Health Care Assistant Early Warning Score

Independent Self Audit

1.0 Purpose

1.1 The purpose of this document is to provide a record of the frequency and range of Early Warning Score recordings by Health Care Assistants in their practice.

1.2 This document also provides a mechanism for audit of practice to support insight and ongoing practice development in the practice of Early Warning Score recording by Health Care Assistants

1.3 This document supports the practice of engagement and implementation in self auditing by Health Care Assistants, of their practice in recording Early Warning Scores.

2.0 Responsibilities

2.1 It is the responsibility of the Health Care Assistant to maintain this audit document on a work shift basis.

2.2 It is the responsibility of the Health Care Assistant to record all Early Warning Score recording on a work shift basis in this audit record, to provide activity data on Early Warning Score recording in practice.

2.3 It is the responsibility of the Health Care Assistant to submit this information on a monthly basis to the Practice Development Coordinator for data management purposes.

3.0 Procedure

3.1 On a work shift basis, the Health Care Assistant must maintain this audit record of their practice in recording patient's Early Warning Scores.

3.2 Every recording of Early Warning Score must be recorded for the purposes of audit in this audit document, as outlined overleaf.

3.3 Each month, these records must be submitted to the Practice Development Coordinator for data management purposes.

Forename	Surname	Clinical Area

Date (Day, Month, Year)	Shift Worked Day Duty (D) 8:00 – 17:00 Evening (E) 17:00 – 21:00 Night (N) 21:00 – 8:00	Total number of EWS scores recorded	Total Number of EWS scores recorded as 0	Total Number of EWS scores recorded between 1 and 3	Total Number of EWS scores recorded above 3

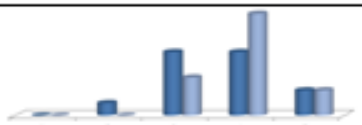
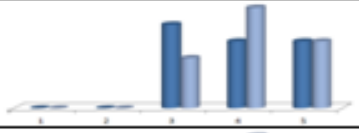
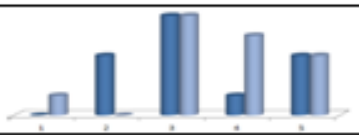
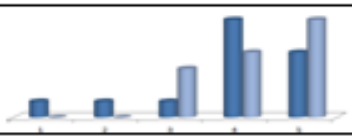
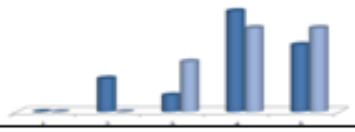
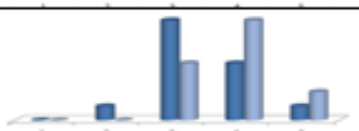
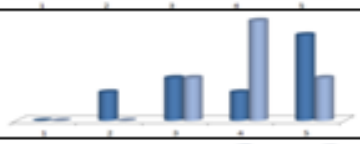
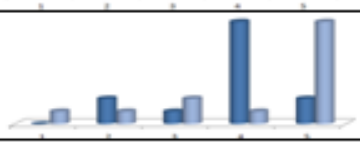
Appendix 14: Team Culture Tool Results

Example

People in my team break rank and go it alone	1 2 3 4 5	People in my team pull together

Results

Pre Post

People in my team have dissimilar values, interests and beliefs		People in my team share values, interests and beliefs
People in my team break rank and go it alone		People in my team pull together
Individuals in my team operate alone and there is conflict between them		There is community spirit and co-operation in my team
My team is ruled by standards of the past		My team is ruled by visions of the future
In my team there are winners and losers, them and us		People confront and move beyond their differences in my team
My team is anti-change		My team is change oriented
There is weak co-ordination in my team		There is strong co-ordination in my team
My team is inward looking and is focused on itself		My team is outward looking and does not focus on itself
My team is dominated by routine and systems		My team is creative and ideas dominated
People do not reflect about their work in my team		People reflect about their work in my team
There is disagreement in my team		There is harmony in my team

Appendix 15: Nursing and Midwifery Quality Care Metrics Results

December

	Location 1	Location 2	Location 3	Location 4	Location 5	Location 6	Total
NEWS/ Observations : Name and HCRN	50%	100%		100%	100%	50%	82%
NEWS/ Observations : Vital signs 12 hourly	100%	100%		100%	100%	100%	100%
NEWS/ Observations : NEWS Dated 24 HR Clock	100%	67%		100%	50%	50%	73%
NEWS/ Observations : RR,O2, FiO2, BP, HR, T, AVPU	50%	33%		100%	100%	50%	64%
NEWS/ Observations : NEWS Score Total daily	50%	0%		100%	100%	100%	64%
News Escalation : Increase in Monitoring	0%	100%			0%	100%	40%

February

	Location 1	Location 2	Location 3	Location 4	Location 5	Location 6	Total
NEWS/ Observations : Name and HCRN	100%	100%	100%	100%	75%	75%	93%
NEWS/ Observations : Vital signs 12 hourly	100%	100%	100%	100%	100%	100%	100%
NEWS/ Observations : NEWS Dated 24 HR Clock	75%	62%	50%	25%	100%	100%	68%
NEWS/ Observations : RR,O2, FiO2, BP, HR, T, AVPU	100%	50%	100%	100%	75%	100%	82%
NEWS/ Observations : NEWS Score Total daily	100%	12%	100%	100%	25%	75%	61%
News Escalation : Increase in Monitoring	100%	29%	67%	100%	100%	0%	59%

March

	Location 1	Location 2	Location 3	Location 4	Location 5	Location 6	Total
NEWS/ Observations : Name and HCRN	50%	75%	100%	50%	100%	60%	72%
NEWS/ Observations : Vital signs 12 hourly	100%	100%	100%	100%	100%	80%	96%
NEWS/ Observations : NEWS Dated 24 HR Clock	50%	50%	75%	100%	50%	60%	64%
NEWS/ Observations : RR,O2, FiO2, BP, HR, T, AVPU	25%	50%	100%	75%	75%	60%	64%
NEWS/ Observations : NEWS Score Total daily	25%	50%	100%	75%	75%	20%	56%
News Escalation : Increase in Monitoring	100%	33%	100%	100%	100%	33%	67%

Appendix 16: Poster

RCSI INSTITUTE OF LEADERSHIP

Implementing the Healthcare Assistant National Early Warning Score (HCA-NEWS) in an Acute Hospital

Roisin McLoughlin
MSc in Leadership in Health Professions Education
(Roisin.McLoughlin@hse.ie)

RCSI DEVELOPING HEALTHCARE LEADERS WHO MAKE A DIFFERENCE WORLDWIDE

Abstract

This organisational development (OD) project centres on the implementation of the National Early Warning Score system for Healthcare Assistants (HCA-NEWS) in a medical directorate of an acute hospital. Recording and communicating a patient's vital signs is a cornerstone of nursing practice. Routine patient observations are now delegated to HCAs working under the guidance of registered nurses (RN). The primary aim of the measurement of vital signs and the use of early warning scoring systems (EWS) is to enhance patient safety. The EWS is calculated as part of the overall vital signs assessment, and should be associated with appropriate and timely communication between the HCA and RN.

The HSE Change model framework was used detailing the progression of the change project. A mixed methodology approach was utilised. Questionnaires were sent to HCAs who met the pre-requisites to attend the HCA-NEWS education programme. HCAs were supervised and supported by the RN to complete a period of supervised practice and skills assessment. HCAs undertook a self audit of EWS recordings. To standardise documentation and communication of EWS findings to the RN an ISBAR communication sticker was completed and placed in the nursing documentation. Focus group interviews were conducted with three groups; Clinical Nurse Managers, RNs and HCAs. An audit of documentation of NEWS observations was undertaken using Nursing Quality Care Metrics. Results from data collection methods were in congruence with the literature.

The findings indicated increased communication between staff, increased confidence in caring, improved teamwork and further opportunities to provide direct patient care. However, the key challenge identified was around deployment of HCA staff that completed EWS training.

Building strong collaborative relationships with key stakeholders resulted in motivation, ownership, partnership and commitment to the change. The project has been successfully implemented in the six medical departments of an acute hospital.

Implementing the Healthcare Assistant National Early Warning Score (HCA-NEWS) in an Acute Hospital

Roisin McLoughlin
MSc in Leadership in Health Professions Education
(Roisin.McLoughlin@hse.ie)

RCSI INSTITUTE OF LEADERSHIP

RCSI DEVELOPING HEALTHCARE LEADERS WHO MAKE A DIFFERENCE WORLDWIDE

Introduction & Background

The role of the HCA has developed to support the changing demands of healthcare. HCAs have an increased responsibility for direct patient care. They play a significant role in the detection and monitoring of acutely ill patients by undertaking routine clinical observations[1]

HCAs that meet national pre- requisites can attend an education programme and be assessed as competent by the RN to undertake NEWS

The NEWS is a bedside track and trigger scoring system used by staff to calculate a total EWS from routinely collected observations. It aims to indicate early signs of deterioration in patients' conditions and prompts more timely medical review and treatment of patients [2]

The HCA must be trained and deemed competent to carry out this role safely as patient safety is of paramount importance

Aims & Objectives

To implement the NEWS for HCA's in the medical directorate of an acute hospital

The objectives of this project are to:

- Provide the National HCA-NEWS Education Programme
- Introduce the HCA-NEWS into clinical practice
- Establish a process to facilitate the HCA to safely perform NEWS
- Evaluate the impact of the HCA News in practice

References

1. Health Service Executive (2013) Facilitators Guide to Healthcare Assistants (HCAs) Measuring, Recording & Communicating Patients' Vital Signs, incorporating the National Early Warning Score (Adult) using the National Patient Observation Chart. Dublin: HSE.
2. Hogan J. (2006) Why don't nurses monitor the respiratory rates of patients? British Journal of Nursing. 15(1), 489-91.
3. Improving our services. A service users guide to managing change in the Health Service Executive.(2008)
4. Kirkpatrick D (1996) Revisiting Kirkpatrick's four-level model. Train Dev 1:54-59.

Methodology

The HSE Change Model was used as a framework to facilitate the implementation of the HCA NEWS in clinical practice

Figure 1: HSE Change Model [3]

Step 1: Initiation
- Force field analysis
- Stakeholder analysis

Step 2: Planning
- Engagement & collaboration with stakeholders
- Commitment & 'buy in'

Step 3: Implementation
- HCA-NEWS Education programme
- Supervision & Competence Skills Assessment
- Self Audit of EWS Recordings
- Documentation & Reporting

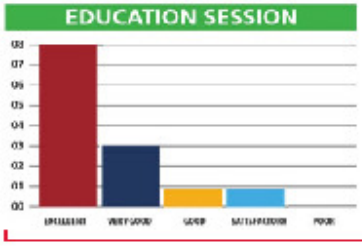
Step 4: Mainstreaming
- Evaluation
- Sustainability

Evaluation

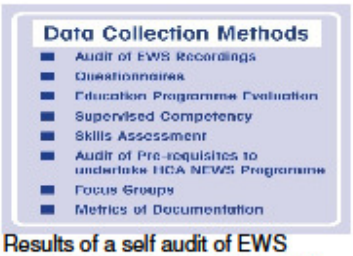
The Logic Model was used in the overall evaluation of this project

Kirkpatrick's 4 Level model was used to evaluate the education programme [4]

Figure 2: Evaluation of Education Programme

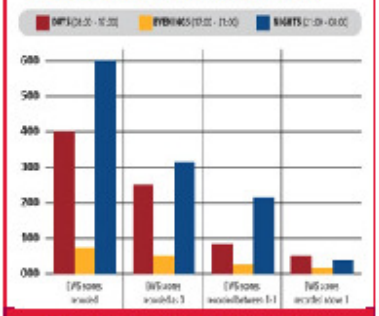


Evaluation



Results of a self audit of EWS recordings over a 2 month period highlighted patients vital signs are mostly recorded at night by the HCA

Figure 3: Self Audit of EWS recordings



Organisational Impact

- Improved Communication
- Improved Teamwork
- Increased Confidence in Caring
- Further opportunities for HCA to provide direct patient care

Conclusion

By equipping the HCA with the relevant knowledge and skills to undertake HCA NEWS this will contribute to early recognition of the deteriorating patient and enhance patient safety